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The Role of the Secondary Principal as a Transformational Leader in High
Performing, Project Based Learning Schools in California

A Dissertation by
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Brandman University
Irvine, California
School of Education

Submitted in partial fulfillment of the requirements for the degree of
Doctor of Education in Organizational Leadership
December 2016

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December, 19th, 2016

The Role of the Secondary Principal as a Transformational Leader in High
Performing, Project Based Learning Schools in California

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When I began my doctoral journey, I had just accepted the position of principal at Minarets High School. Although it may seem that taking on such a challenging position would be a bad idea at such a time, it was the best time for me to begin this journey as a leader.

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ABSTRACT

The Role of the Secondary Principal as a Transformational Leader in High Performing, Project Based Learning Schools in California

by Daniel Ching

Purpose: California (CA) schools are facing increased pressure to implement new content standards and perform well on the California Assessment of Student Performance and Progress (CAASPP). The new standards focus on higher level thinking skills, technology, and skills that cross multiple content areas. These expectations are aligned with project based learning (PBL) as an instructional model. However, there are very few models for PBL schools that are considered high performing. To implement PBL in high schools requires transformational leadership from the principals of the schools to ensure that the framework for PBL is implemented at a high academic level. Therefore, the purpose of this study is to examine Transformational Leadership (TL) amongst principals as it relates to high academic achievement and implementation of CA content standards.

Methodology: Through methodology that included interviews with principals of high achievement PBL high schools in CA, this study was designed to answer the question: *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning School, as analyzed through the lens of the 10 transformational leadership domains of the Transformational Leadership Skills Inventory (TLSi)?*

Findings: The findings from this study demonstrated how TLs of high performing PBL schools used practices based on the 10 domains of TL to create a culture of success on their campus. Some of the major themes in the study included shared leadership,

common language for instruction, creating a culture of freely sharing ideas, structuring time and opportunities for collaboration, and empowering both students and teachers in the planning and design process. The findings indicated that these leaders invested a significant amount of time in reflection, assessment, culture building, and collaboration.

Conclusions: There were identifiable characteristics and themes shared by all participants in this study. More research should be conducted on the specific structures that TL use to train their staff in PBL. Additionally, more research should be conducted to focus on problem solving and decision making as well as personal and interpersonal skills since there were no major themes identified in this study.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION.....	1
Background	3
Crisis in Education: The Need for Change	3
Common Core: A Transformational Change for Education in America	5
PBL- A Potential Solution to the Problem.....	6
The Principal’s Role as TL	8
Gap in Research	10
Statement of the Research Problem	10
Purpose Statement.....	12
Research Question (RQ)	12
Sub-RQs.....	12
Significance of the Study	13
Definition of Terms.....	14
Delimitations.....	15
Organization of the Study	15
 CHAPTER II: REVIEW OF THE LITERATURE	 16
Crisis in Education: The Need for Change	16
Globalization.....	17
The United States international status.....	18
Technology	20
Technology and the job market.....	20
The Millennial generation.....	22
The impact of technology on education.....	23
21 st Century Skills.....	25
Common Core	27
NCLB.....	28
Common Core Standards Initiative.....	30
Common Core Expectations and Focus	31
Common core reading, writing and math.	33
Perceptions of common core.....	34
SBAC Assessment on Student Progress and Performance	35
Implications of Common Core.....	36
PBL	37
History of PBL.....	37
John Dewey.....	37
William Kilpatrick.	38
PBL Focus and Expectations	40
The basics of PBL.....	40
Assessment in PBL.	41
The changed role of the student and teacher.....	41
Implementation of PBL.....	42
PBL and Technology	45
Teaching and learning in a one to one technology setting.....	46
Implications of PBL.....	47

TL.....	47
The Characteristics of TL	48
Transformational change.	49
The Principal as a TL.....	50
Characteristics of transformational principals (TP).....	51
The Demands of the Principal.....	52
Principals of effective schools.	52
Teacher observation and evaluation.....	53
State standards implementation.	53
Implications of the demands on the principal.	54
Research Gap	54
Summary	56
 CHAPTER III: METHODOLOGY	57
Overview.....	57
Purpose Statement.....	57
RQ.....	57
Sub-RQs.....	57
Research Design.....	58
Population	59
Target Population.....	59
Sample.....	61
Sample Selection Process	62
Instrumentation	63
Reliability.....	65
Field Test	66
Validity	66
Data Collection	67
Data Analysis	68
Individual Analyses	68
Inter-Coder Reliability	69
Composite Analyses.....	69
Inter-Coder Reliability	69
Limitations	70
Summary	70
 CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS.....	72
Purpose Statement.....	72
RQs	72
Sub-RQs.....	72
Research Methods and Data Collection Procedures	73
Population	73
Target Population.....	73
Sample.....	74
Demographic Data	75
Presentation and Analysis of Data	75
Results for the RQ and Sub-RQ1.....	76

Visionary Leadership	77
Shared sense of vision and mission	77
Creating a common language for teaching and learning	78
The vision is derived from a shared group of schools	78
Teachers collaborate and discuss topics related to the vision.....	79
Promotion of shared or distributed leadership	79
Collaboration.....	80
Empowering the staff and allowing a voice.....	81
Daily, weekly, or regular meetings with staff and teams.....	81
Diversity.....	82
Free sharing of ideas and perspectives.....	82
Ensuring that all voices are heard	83
Team Building	83
Providing activities to build camaraderie, rapport, and culture	84
Character and Integrity	85
Modeling character and integrity as a leader	86
Establishing clear norms for behavior and expectations for staff and students....	86
Problem Solving and Decision Making	86
Creating courses of action and aiming to accomplish goals or learning	
outcomes	88
Using questions and inquiry in leading, teaching, and learning	88
Including teachers in the decision making process and considering all	
viewpoints	88
Personal and Interpersonal Skills.....	89
Having teachers gain a deeper understanding of students through relationships	
and conversation	89
Teaching personal and interpersonal skills in the curriculum	90
Communication.....	90
Being strategic, intentional, and systematic in communication.....	90
Political Intelligence	91
Understanding the community that you serve	91
Creativity and Sustained Innovation	92
Creating support structures to remain innovative without being stagnant or	
burning out	93
Modeling creativity with students.....	94
Involving students in the design process of PBL.....	94
Summary	95
Results for Sub-RQ2.....	96
TL and Higher Student Achievement	96
Shared sense of mission and vision	99
Creating a common language for teaching and learning	100
Building camaraderie around the school mission and vision.....	100
Empowering the staff and allowing a voice.....	100
Empowering students and allowing a voice.....	100
Building relationships of trust with staff and students.....	101
Reflection using discussion on curriculum and instruction	101

Actively seeking feedback and input from stakeholders	101
Ongoing, structured professional development in-house or by outside entities	102
Daily or weekly meetings with staff.	102
Focus on projects to drive student achievement rather than traditional tests.	102
Using learning showcases for students to display and demonstrate projects.....	103
Using design thinking/theory	103
Summary	103
CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS	105
Major Findings.....	105
Central Question	106
Sub-RQ1	107
Visionary leadership	108
Collaboration.....	108
Diversity.....	109
Team building	109
Character and integrity.....	110
Problem solving and decision-making.....	110
Personal and interpersonal communication	110
Communication.....	110
Political intelligence.....	111
Creativity and sustained innovation.....	111
Sub-RQ2	112
Unexpected Findings	113
Conclusions.....	114
Conclusion 1	114
Conclusion 2	115
Conclusion 3	117
Conclusion 4	118
Conclusion 5	118
Conclusion 6	119
Implications for Action	120
Implication for Action 1.....	121
Implication for Action 2.....	122
Implication for Action 3.....	122
Implication for Action 4.....	123
Implication for Action 5.....	124
Recommendations for Further Research.....	125
Concluding Remarks and Reflections.....	126
 REFERENCES	 129
APPENDIX.....	145

LIST OF TABLES

Table 1. Demographic Information of Respondents.....	75
Table 2. Visionary Leadership Major Themes	77
Table 3. Collaboration Major Themes	80
Table 4. Diversity Major themes	82
Table 5. Team Building Major Themes	84
Table 6. Character and Integrity Major Themes	85
Table 7. Problem Solving and Decision Making Moderate Themes	87
Table 8. Personal and Interpersonal Skill Moderate Themes	89
Table 9. Communication Major Themes	90
Table 10. Political Intelligence Major Themes.....	91
Table 11. Creativity and Sustained Innovation Major Themes	93
Table 12. Summary of Themes by Domain	95
Table 13. Major Themes for TL and Higher Student Achievement	96

CHAPTER I: INTRODUCTION

American public schools were created and founded on principles from the Industrial era. The intent of this educational system was to prepare students to find jobs in an economy that was based largely on blue-collar work (Robinson, 2015). However, the world has rapidly changed economically and socially from the Industrial era. With the introduction of high speed Internet and the unprecedented rate by which we now share information, the world has rapidly taken on a new shape. The world has become a global community, or as Friedman (2008) has so famously described it, “the world is flat” (p. 5).

Unfortunately, our school system has struggled to keep up with the rapid change in the world. With more access to information and communication than ever before, we no longer rely on professors, teachers, or librarians to provide information for us. Instead, more than one billion people have instant access to more information, communication tools, and creation tools than anyone in the 20th century could have ever imagined (Wagner & Dintersmith, 2015). This has taken a long time to impact how we teach our students in American public schools. Most of the learning in our schools has relied on passive methods such as multiple-choice tests and lecture (Wagner & Compton, 2012), leaving our students ill prepared for college and career expectations.

In 2001, The No Child Left Behind Act (NCLB) placed a national focus on increasing the level of student achievement in American schools with specific emphasis on increasing reading, writing, and math skills, as well as increasing the

graduation rate. This created an era shaped by curriculum and instruction that was based largely on preparation for high stakes testing. This singular focus placed a high level of accountability on schools but once again taught students skills that were geared more towards the past rather than looking to the future (Gardner, 2008). However, in 2009, a state-led effort of 48 states helped to create a new set of standards that emphasized a whole new set of skills (Common Core Standards Initiative, 2015).

The common core standards, which are now being recognized and assessed in 48 states, are based on developing the critical-thinking, problem-solving, and analytical skills students need to be successful. The standards are aligned with the current research about what prepares students for college and career as well as the thinking on essential skills and practices that students need to be successful in the new economy (Common Core Standards Initiative, 2015). Since the standards were introduced and adopted, schools across the United States have had to shift their instructional practices and environments to focus more on technology, skills driven instruction that uses performance tasks and critical thinking exercises to assess student learning.

Project based learning (PBL) has been an instructional model that many educators have considered a possible means to address the shift in expectations. Which to teach the Common Core State Standards (CCSS) according to many experts (Larmer & Mergendoller, 2015) has identified PBL as one of the most effective ways. The focus that PBL places on inquiry, solving problems, and using performance tasks to demonstrate mastery, aligns well with the expectations of the CCSS (Buck Institute,

2015). However, the shift to PBL is a dramatic one for most schools, which requires not only an instructional shift, but a cultural one driven by transformational leaders.

There are a number of challenges for principals that are successfully implementing PBL in their schools. Implementing PBL involves a complete change from traditional practices of teaching, leaving many teachers frustrated with the complete shift in approach (Harris, 2014). The shift demands teacher buy in, district level support, community involvement, and resources to implement. Most of all, this requires transformational leadership (TL) from the cite principal to ensure that PBL is successful and leads directly to high levels of measurable student achievement.

Background

Crisis in Education: The Need for Change

The world is changing at a more rapid rate than ever before. More individuals have access to more information than ever before in human history. People across the globe can communicate and collaborate with more people than we could have ever imagined in the 20th century (Friedman, 2008). In his book, *The World is Flat*, Thomas Friedman (2008) examines the incredible amount of interaction and access that more than a billion people have access to across the globe. He demonstrates the fact that the globalization that has taken shape in the 21st century has placed us in a whole new context economically, socially, and culturally. Globalization and the abilities we now possess thanks to the internet and advancement in technology, have changed the ways that the economies of the world operate, thus drastically transforming the makeup of the workforce. Technology has changed the way that humans interact so much so that talents and

skills that were once interpreted as of little importance are now on the forefront of skills needed for success (Zhao, 2016). Rather than relying on unskilled and skilled labor, the developed countries of the world are now focused more on the service industries. In other words, a new reliance on innovation has taken shape in countries such as the United States. This is the world that our current students are facing.

Public education in the United States has failed to keep up with the rapid changes in our world. Our schools were built on an industrial model where memorization was emphasized and students were prepared for unskilled and skilled labor (Robinson, 2015). Lecture, textbooks, and multiple-choice tests were the drivers of instruction and assessment. The Internet completely changed the way that humans interact as well as what was essential for economic success in the United States economy (Wagner, 2015). This changed the necessity for teachers and librarians to be the gatekeepers of knowledge in our schools. Instead, students had access to as many resources as they needed, shattering the need to memorize content in the same way that students once did. This transformation changed the world, but did not immediately impact the way that school taught their students.

According to Wagner (2008), in his *Global Achievement Gap*, countless employers from their surveys indicate that the problem solvers and critical thinkers that they need to find when staffing their organizations are not there. Rather, they have to “unschool” the individuals that come to them so that their employees are not searching for the “right answers” but rather creating the

solutions themselves (Wagner, 2008). Oregon Professor Yong Zhao (2016) explains in his recent book *Counting What Counts: Reframing Educational Outcomes that* we once needed to suppress creativity in the classroom so that routine tasks were conditioned in students to prepare them for their work ahead. However, now, creativity and entrepreneurship, once reserved only for a few, are now two of the most important factors in economic success (2015). It is important that these skills and this overall shift in approach begin to impact our schools if they stand a chance at being successful beyond their public school years.

Common Core: A Transformational Change for Education in America

In 2001, the NCLB Act placed a high level of accountability on schools. The content driven standards were supposed to be indicative of what students needed to know and master before graduation. The act was intended to increase achievement levels and close the gap with other developed countries around the world (Dee, Jacob, Hoxby, & Ladd, 2010). There were both positive and negative outcomes to the NCLB era, however there was a clear objective that was far from the current research on what students need to learn to be college and career ready. This fact among others, led to the establishment of the Common Core Standards Initiative.

In 2009, members of National Governors Association Center for Best Practices (NGAC) and the Council of Chief State School Officers (CCSSO) led an educational reform effort to rewrite national standards that were more indicative of the research on what skills were needed for students today in college, career, and life (Common Core Standards Initiative, 2015). These standards placed a high emphasis on critical thinking,

problem solving, analytical performance tasks, and college and career readiness. These came to be known as the Common Core Standards and were adopted by 48 states, two territories, and the District of Columbia. The standards were aligned with higher order thinking skills and the states agreed that the standards would at no point be lowered once adopted at the state level (Common Core Standards Initiative, 2015).

The adoption of Common Core Standards has led to a shift in focus for schools. As opposed to the content driven, multiple choice assessed practices of the NCLB era, the new standards ask students to ask questions and demonstrate mastery by explaining how they came to their conclusions (Silver, Dewing, Perini, & Jacobs, 2012). For example, a student in math may have formerly answered the math problem by giving the answer, whereas now the focus would be shifted on asking the student to articulate how they came up with the answer. The era of assessment lead by the Smarter Balance Assessment Consortium (SBAC) will now assess students on performance of these higher order thinking skills and will adjust the questions asked of each student based on how they respond with each question (Lenz & Wells, 2015). This calls for a completely new approach to instruction. Many experts feel that PBL, is an effective instructional approach to teaching and learning the Common Core Standards (McKnight, 2014). As a result, there has been an increased interest by schools in this instructional model.

PBL- A Potential Solution to the Problem

PBL is described as a classroom setting where students work on a complex task for an extended amount of time that is driven by inquiry and problem solving based on a driving question (Buck Institute, 2015). In a PBL model, teachers act more as a guide to the students learning rather than the primary source of information and classroom

direction. PBL seeks to enable students to acquire skills and usable knowledge that is not based on recall for a test but rather on skills and knowledge that will help students in other aspects of life (Bransford, 1999). PBL is not a departure from the basic essential skills of reading, writing, and math skills. Instead, it seeks to use these skills as a foundation for high order thinking and research. This will often begin with defining learning goals, setting expectations for learning, breaking projects into manageable pieces that focus on different sets of skills, and constant feedback as students work toward mastery (Boss, 2015).

One of the key factors in PBL is student engagement and involvement in the learning process. Personalization and individualization of learning for the student is based on both skill level and interests (Gerlach, 2008). The process of PBL requires the teacher to be adaptable in both pacing and flow of the class as students tend to be operating at different levels of complexity. Three elements of rigor, relevance, and engagement are key factors in the teacher determining the effectiveness of the lesson (Welsh, 2006).

The assessment that the PBL model incorporates is based on a performance task system that focuses on skills for mastery. Performance task assessment is an essential part of PBL and includes the simple act of showing what you have learned through demonstration. Schools that have implemented this at a high level such as Envision schools in California (CA), have spent time refining the system of rubrics and calibration of assessment for performance tasks (Lenz & Wells, 2015). When PBL is implemented schoolwide, teachers are trained in project design, assessment, and methods of questioning. However, this theoretical framework comes with its challenges.

PBL comes with challenges for administration and faculty. Technology has enabled many schools to successfully implement PBL through providing students with opportunities for research and project creation using digitally based programs. However, resources and curriculum are two of the major challenges that teachers face when teaching using the PBL approach. In many cases, teachers are asked to develop curriculum on their own and design projects on a tight budget. This forces many teachers to practice some more traditional methods such as lecture to fill the gaps (Sicina, 1996). These challenges often become challenges for the principals who are leading the efforts to implement PBL on their campuses. This is why TL may be the difference between schools that implement PBL on a high level and those who struggle to get to that point.

The Principal's Role as TL

In order to successfully implement an instructional model that represents such a significant shift in organizational approach such as PBL, principals of these schools must demonstrate TL. Transforming a traditional school into a PBL school requires a change in mindset, behavior, culture, and systems. Principals are responsible for this major shift in the culture of the school, including classroom instruction.

Principals lead any and all major changes on high school campuses, which requires them to become transformational leaders if the change they lead is to become successful and sustainable.

TL takes on many different shapes and approaches within organizations. There has been significant research on the characteristics of TL, but some of the most important characteristics of TL include a high level of emotional intelligence, a focus on transformational relationships rather than transactional, developing individuals within the

organization into leaders, and providing the members with something to believe in (Anderson & Ackerman-Anderson, 2001). Principals who impact their schools in a positive way, develop their staff members to be leaders themselves. TL functions in a way that team members are not driven by egos but are driven by the purpose set by leaders in a “co-creative” environment (Anderson & Ackerman-Anderson, 2001). TL fosters a culture in which agents of change are created and empowered team members who take ownership of the change taking place in their organization (Osula & Ng, 2014). This type of leadership is essential for schools implementing PBL.

Successful school leadership focuses on transforming teaching practices based in research and practice. Leading educational researches have spent years working with administrators and teachers on refining practices to improve student achievement. These leading researchers stress the importance of providing an instructional framework for teachers, rather than telling them exactly how to teach. Daggett (2015) stresses that teachers are the most important piece of this equation and that the job of the leader is to provide research based structures to support achievement.

The leading instructional research focuses on principals playing an active role in day-to-day curriculum instruction. This requires them to model desired behaviors, participating side by side with teachers in training and always placing a priority on instruction and curriculum (Marzano, Waters, & McNulty, 2005). Principals and teachers alike are being asked to align curriculum, standards, and best teaching practices in way that has never been asked of them before. With the push to common core standards, there is a focus on connecting these best practices with a rigorous curriculum that is assessed throughout instruction (Ainsworth, 2010). With the focus of common

core standards on performance tasks and higher order thinking, these requirements have become more challenging than ever.

Gap in Research

In reviewing research on PBL implementation there are several areas that need to be addressed. There have been studies on the perceptions of students and teachers in PBL environments and the research points to a widespread desire to have more structure in professional development and instructional support (Ott, 2015). Additionally, there is much research in the theory of PBL and the experience of small groups in project based settings (Short, 2011; Gordon, 2013), however, the professional development and training on a schoolwide scale in high performing schools is lacking. Much of the research focuses on the experience of students in a project based setting or the perceptions of the students and teachers, however, the structure, strategic planning, and ongoing support from a leadership perspective has not been explored. A study must be conducted on how principals in high performing, PBL schools, use TL to help implement PBL as well as lead to high levels of student achievement.

Statement of the Research Problem

Schools across the nation are being asked to change the way that students are taught and assessed. The Common Core Standards require students to learn analytical skills and utilize critical thinking to problem solve (Common Core Standards Initiative, 2015). This requires teachers to focus more on skills rather than content as they have in the past. Teachers must synthesize content into performance-based tasks to ensure that students are learning these essential skills (McKnight, 2014). PBL provides teachers with an instructional model to facilitate this type of skills-driven learning.

Transforming a school from a traditional instructional focus to one based on PBL is a complex process that takes a shift in the mindset of the culture of the school led by the principal in collaboration with the staff. It is not something that can be accomplished in a short period of time and involves learning from mistakes and collaborating to find solutions (Larmer & Mergendoller, 2015). Teacher and student perception of PBL as an instructional model is positive in most cases. Teachers and students feel that PBL provides opportunities for high levels of engagement and high order thinking skills (Ott, 2015). However, there is often a lack of resources, administrative support, and structure to implement PBL at a high level schoolwide (Ott, 2015). Successful implementation of PBL that leads directly to high levels of student learning requires effective leadership.

The expectations for high school principals are high and include many facets such as community organization, budgets, students discipline, college and career preparedness and more. However, the most important role of the principal is to provide leadership in instruction through the development of teams for collaboration and strategic planning (Dufour & Marzano, 2011). Principals of PBL schools have to take this a step further and demonstrate TL to successfully implement PBL in their schools. This requires principals to help shift the mindset, behaviors, and culture of their schools to successfully implement PBL and lead students to higher levels of achievement (Anderson & Ackerman-Anderson, 2001).

It is suggested that studies be conducted to determine the role of instructional leadership in implementing PBL in secondary schools (Sicina, 1996). This would include studying how principals provide ongoing professional development opportunities and modeling of successful PBL strategies (Ott, 2015). This has impeded efforts to fully

implement PBL in secondary schools across the state of CA. However, a few secondary principals have been successful in this effort. Further study is recommended to identify PBL schools who meet the characteristics of full PBL implementation while also experiencing high success rates on state assessments (Short, 2011). More information is needed on how they have accomplished this phenomenon of transforming their traditional schools into fully implemented, highly successful PBL schools. Models for success in these areas must be found and examined to provide information on how principals have used TL skills to bring about high performing PBL implementation.

Purpose Statement

The purpose of this phenomenological study was to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 CA Assessment of Student and Performance and Progress (CASSPP) test as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi).

Research Question (RQ)

The RQ is: *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?*

Sub-RQs

- 1) How have secondary principals at high performing project based learning schools use the 10 domains of transformational leadership to create a culture of success in their schools?

- 2) How have the transformational leadership characteristics of secondary principals at Project Based Learning schools led to high levels of student achievement?

Significance of the Study

The world is rapidly changing and the job markets worldwide have been flipped upside down by globalization of world economies. The skills needed to survive and thrive in today's economy must be addressed in our school system. The success of our country depends on the ability of our schools to teach 21st century skills to our students that will equip them to flourish in this new world. We have to identify these skills, implement them into our state standards, and find ways to deliver instruction that is most conducive to preparing them in this way.

The results of this study will provide new information on how state standards based on the Common Core Initiative are being successfully implemented in PBL schools. Political leaders will be able to use information in this study to get new insights on if this method of instruction and its value in education in the United States. District and school leaders will be able to use information and data found in this study to replicate the success levels of schools that are using PBL to teach students state standards effectively. Teachers can take the information found in this study to inspire positive and productive change in their classrooms as well as their schools. Findings in this study can help leaders promote learning that is aligned with student needs and ensure that we are preparing them for the job markets that they will be entering as adults.

Definition of Terms

The California Assessment of Student Performance and Progress. This is the computer based assessment that students have been given in 2015 and 2016 that addresses the new state standards in English Language Arts and Mathematics.

Common Core State Standards. These are standards adopted by a majority of states in the United States that address what students should learn K-12 in English Language Arts and Math. These standards were created after years of using state standards based on the NCLB Act.

Project Based Learning. A type of learning style in which students learn content and skills through focusing on hands on projects for an extended amount of time, using questions and inquiry to drive the instruction.

The Smarter Balance Assessment Consortium. This was the group that created the assessment for Common Core Standards that was first piloted in 2014 in states like CA.

Transformational Leadership. Leadership that involves a significant transformation through a strong vision, an assessment of needs, and a strategically coordinated plan to reach goals.

Transformational Leadership Domains. White and Larick developed the TLSi. This inventory uses 10 domains of leadership theory; Visionary Leadership, Communication, Problem Solving/Decision Making, Personal/Interpersonal Skills, Character/Integrity, Collaboration, Creativity and Innovation, Diversity, Team Building, and Political Intelligence. These domains served as the frame for the questions asked in this study.

Delimitations

This study was delimited to Principals of high performing PBL High Schools in CA.

Organization of the Study

This study is arranged into five chapters and concludes with references and appendixes. Chapter II provides a detailed review of literature related to the theoretical framework, PBL, Common Core Standards, and TL. It is followed by Chapter III, which presents the research design and study methodology as well as an explanation of how the data was gathered, procedures used, and a description of the study population and sample. Chapter IV contains an analysis of the data and findings from the study. A description of the common themes that emerged and an interpretation of the findings are presented. The findings, conclusions, and recommendations are thoroughly discussed in Chapter V. The study ends with references and appendixes.

CHAPTER II: REVIEW OF THE LITERATURE

In this study, TL was studied by examining the role of high school principals at high achieving PBL schools in CA. The literature review begins with globalization, the technology revolution, and the 21st century skills need for education to make an impact for students. A synthesis matrix was used which identifies the research variables that each source addresses (see Appendix A). The study of the growing needs of education allows us to further examine the direction of state standards, the basis and framework for PBL, and the role of the high school principal as a TL in meeting the needs of students in the modern era. In order to better understand the content of this study, four areas were analyzed in relation to the RQs: (a) crisis in education and the need for change; (b) common core; (c) PBL; and (d) TL.

Crisis in Education: The Need for Change

There is a growing need to transform education to match the impact of globalization, technology, and the changing job market. The driving change factors are necessary because as the world has changed so rapidly, our school are providing our students with a formal education that is based on needs from the past rather than on what will await them in the future (Gardner, 2008). We are at a turning point in history in which the rate of technology and innovation is unparalleled, leaving education with no choice but to act swiftly and strategically (Friedman, 2008; Dutta, Geiger, & Lanvin, 2015). Students today, in most parts of the world, have not grown up in a world where text messaging, Google, and social media do not exist (Jacobs & Association for Supervision and Curriculum Development, 2010). This is a fundamental difference between the students of today and the students of the past in terms of backgrounds,

interests, skills, and needs that education must offer in order to make them competitive in a global economy. The students of today are considered part of “the first truly global culture” (Tapia, 2013, p. 191). While the United States has seen plenty of reforms and initiatives since the beginning of formalized education, at a time when drastic reform is needed most, many of the changes that have taken place are just adjustments to existing practices (Jacobs & Association for Supervision and Curriculum Development, 2010). These facts point to the necessity of understanding globalization and how it relates to education today.

Globalization

There is no argument against the fact that the world is more interconnected than it has ever been before, despite the varying opinions on the benefits and harm of that reality (Bertelsmann & Stiftung, 2014). Globalization can be defined by “the integration of economies via movements of goods, capital, ideas and labor” (Bloom, 2006, p. 61). The world has become “flat” in the sense that people from all over the globe are working together or competing against one another in a “real time” format that breaks down traditional barriers such as nation status, background, or resources (Friedman, 2008). What was once considered outsourcing, has now gone away as the world market has normalized this process through the practice of seeking out the best products, practices, ideas, and innovations, regardless of what country or continent these may come from (Friedman & Mandelbaum, 2011).

The reality of globalization has afforded many countries, who were once dependent on their domestic economies and who lacked the infrastructure to expand global commerce, to open up new doors to the world market. Companies in the United

States have taken advantage of recent growth in other countries to establish beneficial partnerships such as utilizing call centers in India, software development in Bangalore, and manufacturing in Ireland just to name a few (Committee on Prospering in the Global Economy of the 21st Century, 2007). However, as promising as many of these partnerships have been for companies in the United States, there is an underlying insecurity with the amount of reliance on global partnerships. The growth of global partnerships has created a job market in the United States in which previously secure jobs in manufacturing and skilled labor are now not as common or available to Americans as they once were. The job market for highly skilled and knowledge based industries has increased, while these traditional jobs have begun to decline domestically (Freidman, 2008). This “flattening” of the world has empowered more small groups and individuals to start companies and succeed in the economy than ever before, but the new norms of the world market are still depending on nations, companies, and coalitions to define the framework in which globalization will move forward in a positive direction (Freidman, 2008; Friedman & Mandelbaum, 2011).

The United States international status. Following the Cold War, the United States took on the role of leadership as globalization had started to take shape, even before the technological revolution that was to come. The demise of the Soviet Union, was an example of how quickly power can shift (Committee on Prospering in the Global Economy of the 21st Century, 2007). However, this created a scenario in which the U.S. economy rushed into labor market in which “Americans had to run even faster” than ever before to maintain the lifestyle of the American standard of living (Friedman & Mandelbaum, 2011). As technology progressed, Americans took advantage of the fact

that many of the innovations of the past such as “electric power, the telephone, the automobile, and the airplane” (Committee on Prospering in the Global Economy of the 21st Century, 2007, p. 30) would continue to be created in the United States. However, it is becoming increasingly apparent that America as the land of innovation is not guaranteed as it has been in prior decades. Rather, the future of the economic status of the United States will depend heavily on the “creative class and entrepreneurs” (Zhao, 2016, p. 70). We are no longer in an era of “knowledge scarcity,” in which we relied on an economy where many people carried out the same tasks in the workforce like we were in the industrial and agricultural eras (Wagner & Dintersmith, 2015; Zhao, 2016). Rather, the United States will depend on a new generation of innovators and creative minds to drive the economy.

The United States has to make significant changes in the way that globalization is approached. There are numerous factors as to why the United States has slipped in its status as a world economic power. In order to succeed in this global economy, the United States has to adapt to globalization, adjust to the technological revolution, and address budget deficits that are among the highest this country has ever seen (Friedman & Mandelbaum, 2011). The United States is rated second amongst developed countries in infrastructure and resources, but it is ranked among the lowest amongst the super powers in terms of openness of trade (Bertelsmann & Stiftung, 2014). This change has to fundamentally begin with a shift in education from one based on an old, outdated industrial model, with one that centers on the reality that our students are facing a global economy that will require them to learn from a completely new set of principles and practices (Robinson, 2015).

Technology

Technology has revolutionized the way that humans interact and function in modern society. It has reshaped the way we look at talents and skills, and has given prominence to skills such as innovation, creativity, and collaboration that we have never seen before (Zhao, 2016). At one point, the internet was simply a communication tool, but now, it has completely transformed the way the world works (Wagner, & Dintersmith, 2015). Since 2004, 1.8 billion people have gained access to the internet, creating a world in which mobile internet connection is the norm (McKinsey & Company, 2014). In a report prepared for the G20 conference in Istanbul, Turkey, in 2015, it was stated that, all jobs will be complemented by technology and many jobs will be replaced by technology (World Bank Group, 2015). Nations are recognizing this critical truth and governments are scrambling to expand their infrastructure for mobile-network to facilitate the transformation of the job market.

Technology and the job market. The world job market, particularly in developed countries is now polarized. The highest demand is now focused on workers who can manipulate technology or have a high number of creative skill sets (World Bank Group, 2015). In a study of over 702 detailed occupations, Frey and Osborne (2015) discovered that a wide range of non-routine cognitive tasks are becoming computerisable. This means that not only are non-skilled jobs at risk, but many of the jobs that would be considered mid-level management jobs are being replaced by software and computers that make simple judgment calls as efficiently as humans. In addition, Frey and Osborne (2015) report that 47% of jobs are in the high risk category of computerization.

In addition to the computerization of jobs, there are four trends that are shifting the job market as it relates to technology. First, there has been a transformation of how we sell in today's market. As stated previously, we are no longer living in a world of "knowledge scarcity" (Wagner & Dintersmith, 2015, p. 27). In fact, applications such as Apple's Siri and Google Now, recognize spoken word, leaving information accessible at the mere utterance of a word (Frey & Osborne, 2013). Instead we live in a context in which people are reliant on the skill of synthesizing information and evaluating the value of information (Collins & Halverson, 2009). This changes the old notion that one person may know more than the other. Instead, the "buyer" has the knowledge of the product or service just as much as the seller (Pink, 2012). In this knowledge based economy, the onus for what to do with the knowledge has shifted.

The second trend that is taking place is the way in which we work collaboratively with each other. There is far more instances of meeting remotely, short-term tasks, and flexibility of how and when we meet to work collaboratively (World Bank Group, 2015). The third trend is the availability of *big data* (McKinsey & Company, 2014). Big data refers to the gathering and management of a large collection of data for organizations that is managed often by a third party and is much more "scalable" than the old practice of managing data "in-house" within an organization (McKinsey & Company, 2014). In the years before this trend, companies had full time staff to manage the data, whereas now, this can be done remotely through sophisticated software and highly skilled technicians to monitor it. This enables sales, Human Resource, and marketing procedures to happen quicker and more accurately.

The last trend that is affecting the job market is the availability of open source software and resources. Sources such as Wikipedia and YouTube have created a context in which information is free, fast, and up to date based on the collaborative participation of individuals worldwide (Tapscott & Williams, 2000). Often referred to as “collective intelligence,” this movement has enabled not only information to be shared, but also software and programs, accessible to individuals for free through creative commons licenses (Jacobs & Association for Supervision and Curriculum Development, 2010). These trends, among others, have drastically impact the job market both in the United States and worldwide.

The Millennial generation. Millennials is the term that is generally dedicated to young people who have reached adulthood by the year 2000 and beyond (ages 18-34), making the population of this particular group 70 to 80 million in the United States (Tapia, 2013). These young people have grown up in an era where the internet, mobile devices and social media are ingrained in not only the culture, but every aspect of life (Jacobs & Association for Supervision and Curriculum Development, 2010; Yun-Jo & Reigeluth, 2011). They are no longer “bound by locality” but instead create their communities through social networking (Collins & Halverson, 2009). In fact, Millennials are more inclined to work collaboratively with their peers than their predecessors through texting, email, or social media (Tapia, 2013). The group of young people who have started working now will retire by 2050 and will experience jobs that are much more fast moving and connected than ever seen before (Tapia, 2013; World Bank Group, 2015). With all of the change that has occurred with this new generation, schools have still been

stuck in the 19th century and there is a new demand to teach these students to be thinkers and lifelong learners who will be successful in today's world.

The impact of technology on education. With the rapid change through technology and globalization, schools have fallen behind. The world has changed drastically, but schools, even the ones with the highest test scores, have not made the necessary changes required to meet the demands of the new world (Wagner, 2008). There are two major factors that contribute to this fact.

The first major factor in schools falling behind is the fact that schools in large part, have not equipped their students with the technology to be successful. Schools have still been using books, paper, pencils, and blackboards for instruction. (Collins & Halverson, 2009). They have implemented technology in labs and through “boutique innovations” but computers have not been at the core of education (Collins & Halverson, 2009). Technology provides students with access to resources and information that is changing constantly. They can use these resources at home as well as in the classroom (Collins & Halverson, 2009). The students who attend our schools have grown up with the internet and have spent their entire lives in technology, yet our schools have not embraced the idea of implementing a comprehensive program in which technology is used for learning (Yun-Jo & Reigluth, 2011).

The second fact contributing to schools falling behind in technology is the failure to truly embrace an educational philosophy that is centered around technology driven instruction and the benefits to both teachers and students in establishing that mindset. In a study examining acceptance of technology by rural teachers, Cerovski (2016) found that while teachers were predominately accepted as an idea, teachers were reluctant to

completely embrace technology in the classroom based on experiences of it not working, the Wi-Fi going out, or not having the training to truly utilize it. Another study by Yun-Jo and Reigeluth (2011) indicated that while teachers were excited about technology in their schools, the professional development has been too broad and not focused on practical teaching methods to help them feel confident in implementation. The 126 respondents suggested that time for hands-on practice, subject specific training, learner-centered strategies, and practical applications be used in training teachers to implement technology (Yun-Jo & Reigeluth, 2011). Teachers must be given the tools to teach using technology. These studies elude to the fact that technology as a driving force in schools has not gained the traction needed to progress.

We often speak of literacy as a fundamental objective for our schools however, digital literacy has not been a priority in schools. Today, in order for a student to be “literate,” they also have to understand how to use technology productively through digital media, blogs, other technologies that are being created on a daily basis (Jacobs & Association for Supervision and Curriculum Development, 2010). Some of the skills and practices that were once considered paramount might not be considered as important today (Gardner, 2008). Millennials are more inclined to be motivated and engaged by technology rich learning experiences and can more easily explore their interests through the use of technology (Collins & Halverson, 2009; Yun-Jo & Reigeluth, 2011). In fact, Millennials understand that the teacher is not the only person with access to knowledge (as it once was) and that experience is no longer strictly reserved for older individuals (Tapia, 2013).

21st Century Skills

There is a need for a new vision in education in the United States. Students need to gain the new necessary skills to thrive and survive in a global economy (Wagner, 2008). It is necessary that a focus be placed on skills above content areas and a vision that is not based on the old model of literacy and hierarchical structures of knowledge (Jacobs & Association for Supervision and Curriculum Development, 2010; Robinson, 2015). Research, writing, oral communication and “product-oriented learning” need to be implemented to address what the global economy will demand of our students upon graduation (Wagner, 2008; Zhao, 2016).

The Partnership for 21st Century Skills (P21) (2011), is an organization that has created a set of necessary skills for students to be successful in the 21st Century. These skills are organized into four main categories consisting of: (a) core subjects and 21st century themes; (b) learning and innovation skills; (c) information, media, and technology skills; and (d) life and career skills (The Partnership for 21st Century Skills [P21], 2011). The 21st Century skills can be even further summarized by the “Four Cs” of (a) creativity, (b) collaboration, (c) communication, and (d) critical thinking, which are identified as four critical skills in helping students learn using higher order thinking skills through active participation in their learning experience (P21, 2011).

Creativity is necessary for students in today’s world. Studies have shown that “creativity and innovation is among the top five applied skills” (Casner-Lotto & Barrington, 2006, p. 50) anticipated by employers to be of the utmost importance for a successful career. Unfortunately, learning in schools has been “overwhelmingly passive” and has focused more on rote memorization and recall rather than on experiences that

offer real-world application and creativity, creating a discrepancy on what students actually learn, versus what they will face in the job market (Wagner, 2008; Wagner & Compton, 2012). Creativity involves testing theories, coming up with ideas, and integrating knowledge across disciplines (Casner-Lotto & Barrington, 2006). P21 recognizes that creativity and innovation involves teachers facilitating opportunities for students to learn from failure, understand diverse perspectives, and elaborate their perspectives and ideas through multiple platforms (P21, 2009).

Much like creativity is needed to prepare our students for the work world, critical thinking, communication and problem solving are considered essential to the future of our students (P21, 2011). Casner-Lotto & Barrington (2006) indicated from their study with HR and senior executives that 69% of respondents felt that young employees came to them “deficient” in the skills of problem solving and 80.9% felt that communication was “deficient”. Wagner stated that employers cite *creative-problem solving* as one of the most important skills of their employees. In a study evaluating teacher perceptions on 21st century skills implementation, Happ (2013) found that despite the glaring deficiencies of critical thinking applications in their classrooms, many math and science teachers believed that they were effective in providing critical thinking opportunities in their class. However, data revealed that teachers with less than 16 years of experience were not performing well in this category due to time constraints on what they must teach in the school year (Happ, 2013). Findings would indicate that the elective course have the freedom to implement these strategies, while “core” teachers did not provide time for students to work using the 4Cs at a high level.

The research clearly indicates that there has been a vast discrepancy between what is expected and tested in American schools and what is expected of our students in the job market (Wagner, 2008). It is essential that schools focus on what Perkins (2014) describes as the six beyond: (a) beyond basic skills; (b) beyond the traditional disciplines; (c) beyond discrete disciplines; (d) beyond regional perspectives; (e) beyond mastering content; and (f) beyond prescribed content (Perkins, 2014). This will require our schools to implement learning opportunities that reflect our society more accurately such as opportunities to utilize media literacy, opportunities for self-direction, the ability to synthesize information, and experiences that enable them to create products in an educational setting (P21, 2011; Zhao, 2016). This requires leadership in taking the step towards what is required of our students to be successful.

Educators need support, direction, resources, and skills from management to be successful in this pursuit (Robinson, 2015). In a study conducted with superintendents across CA, Sweet (2014) found that districts can successfully begin implementation of these skills by focusing on PBL, linked learning, and customized curriculum writing by the teachers. In order to accomplish this, Sweet (2014) explained that superintendents indicated the use of professional learning communities (PLC), expanded technological infrastructure, and professional development as key strategies in accomplishing this goal. This ambitious but necessary transition will require long term planning and collaboration across the districts, state, and nation.

Common Core

In 2009, the NGAC and the CCSSO began a state based initiative to reshape and redirect educational standards across the nation (Common Core Standards Initiative,

2015). Prompted by the failure of NCLB legislation to deliver on the high academic achievement standards and the increasingly narrow focus of what students were tested on, the initiative aimed at creating more rigorous standards that would prepare students for college and careers (Common Core Standards Initiative, 2015; United States Department of Education, 2016). These new standards came to be known as the CCSS and by 2015 were adopted by 42 of the states (Common Core Standards Initiative, 2015). The implementation of the Common Core Standards has taken the accountability aspect of NCLB and combined it with expectations more aligned to the skills necessary for students to be globally competitive (Executive Office of the President, 2015; National Governors Association for Best Practices [NGAC] and Council of Chief State School Officers [CCSSO], 2014).

NCLB

President George W. Bush signed the NCLB Act on January 8, 2002, establishing one of the most significant pieces of legislation in the history of American formalized education (Dee et al., 2010; Present, 2010). NCLB was a reauthorization of the Elementary and Secondary Education Act of 1965 (No Child Left Behind Act [NCLB], 2001). The goals of the legislation were to provide equality in education, ensure that classes were taught by highly qualified teachers, allow for annual assessment to be created by the states, and to reach the goal of every student performing at a proficient level in math and English by 2014 (Dee et al., 2010; NCLB Act, 2001; Spring, 2012). The level of school accountability and expectations that NCLB created were higher than ever before, however, the narrow focus and test-driven culture that was created, left many people wondering what was really accomplished (Newell, 2014).

Accountability was a driving force behind the core of NCLB. Schools were provided with federal funding, referred to as Title 1 funds, based on a low socioeconomic percentage calculation, with the expectation that these funds would be utilized to improve math and English scores and close the achievement gap of traditionally low performing “sub groups” of students (Dee et al., 2010). NCLB set expectations for schools to meet Annual Yearly Progress (AYP) rates or they would be penalized with sanctions such as Program Improvement, requiring schools to implement state mandated practices for improvement (Dee et al., 2010).

The accountability established in the NCLB era did lead to some positive trends in student achievement, although it was not nearly as successful as Bill Clinton and George Bush would have hoped it would be in reaching its goals (Dodson, 2015). There was a new focus on evaluating data at a school site level and greater attention was emphasized on underperforming schools (Present, 2010). There were some gains in math achievement and there were positive upward trends in graduation rates in low-income areas (Present, 2010).

The negative impact of NCLB was not in what the expectations were, but rather, the failure existed in the culture of testing and narrow focused standards and how that affected the learning environment in our schools. School leaders felt the pressure to perform, creating an atmosphere where “teaching to the test” and “drill and kill” strategies become more of a focus than real and relevant learning (Dee et al., 2010; Newell, 2014). Although a stated goal of the NCLB legislation was to provide higher level thinking skills, administrators place more of an emphasis on the state tests than on development of these skills (Newell, 2014). This educational climate where the promised

goal of closing the education gap and the vision of providing students with a highly education had failed, led many to begin looking to reform to change the landscape of education (Jones, 2014; Newell, 2014).

Common Core Standards Initiative

During the NCLB era, research indicated that there was a growing urgency to change to course of education in the United States. Only about a third of high school graduates enter college at grade level and a majority of the students graduating are not ready to compete globally (United States Department of Education, 2016). The 21st Century Skills which have been recognized as critical for the success of the next generation, were largely ignored in the NCLB era (P21, 2011). For these reason, the CCSS Initiative was established in 2009.

The CCSS have since been adopted by the majority of states (United States Department of Education, 2016). The standards were created based on the most current research on the skills required to prepare students for college, career, and life with a particular focus on critical thinking, problem solving, and analytical skills (Common Core Standards Initiative, 2015). They address only math and English and place an expectation that students will be assessed on a computer adaptive test in grades three through eight as well as the 11th grade (Center for Public Education, 2013). Research and analysis has shown that the standards are more rigorous than the standards of NCLB making it likely that the results of the assessments will not be favorable for most schools in the first few years of implementation (Center for Public Education, 2013).

On December 10, 2015, President Barack Obama signed the Every Student Succeeds Act (ESSA). The ESSA replaced NCLB and established federal support for the

newly adopted, more rigorous state standards, while also continuing to focus on the accountability that was established by NCLB (Executive Office of the President, 2015). With the complete support of federal and state governments, Common Core Standards, despite the highly politicized debates over the initiative, have been established as the framework for a new era in American education.

Common Core Expectations and Focus

The CCSS were designed on researched based expectations that would provide a learning experience for students that was highly rigorous in math and English, geared toward college and career readiness, aligned with 21st century skills, and internationally benchmarked (NGAC Center & CCSSO, 2014; Common Core Standards Initiative, 2015; Bell et al., 2011). The standards were designed with a focus on “fewer, higher, and clearer” expectations for student outcomes, shifting the focus on teacher driven performance, to a more student based approach (Kendall, 2011). A major shift has occurred from the previous NCLB based standards in that the CCSS place a higher emphasis on skills based learning rather than on a content based approach (Kendall, 2011). The CCSS have created a “paradigm shift” in which high stakes testing still exists, but the purpose of instruction is geared toward higher levels of learning which will help students be adaptable in different academic contexts rather than on preparation for performance on the state exams (Bell et al., 2011).

The CCSS have not mandated particular teaching strategies and curriculum. Instead, the standards emphasize locally developed curriculum based on the expectations provided in the standards (Bell et al., 2011). For example, while the English standards place a high priority on non-fiction text interpretation and analysis, there is not

recommended text provided by the states (NGAC & CSSO, 2010). Instead, the CCSS promote a constructivist style of learning where the teachers are heavily involved in the development of standards based activities in which they act as more of a facilitator than a dictator of classwork (Hoffman, 2013). This style involves an approach which begins with essential questions to drive instruction with the goal of developing skills and acquiring content knowledge along the way, rather than attempting that in reverse order as in the NCLB era (McKnight, 2014). This style lends itself to more of a project based instructional method in which students are actively engaged in finding answers through hands-on learning (McKnight, 2014; Hoffman, 2013). Although professional development specific to this style of teaching is still in the developmental stage, schools and district have begun to implement this strategies to develop curriculum by prioritizing standards (Dagget, 2015).

Standard prioritization is no longer based on what may be on the state exam, but break the standards down by domain, clusters, and standards (Bell et al., 2010). The prioritization of standards allows for the increased focus on skills development and makes the goal of reading and writing across curriculums more applicable to students (Calkins, Ehnrenworth, & Lehman, 2012; Common Core Standards Initiative, 2015). In just the third year of assessment in the states that have adopted the CCSS, teachers and principals have already been recreating their curriculum based on this practices. In a survey given to teachers across five states, a study found that 82% of math teachers and 79% of English teachers, have change more than half of their instructional materials based on the expectations of CCSS (Kane, Marinell, Owens, Staiger, & Thal, 2016). This

has already established the expected shift in instructional focus across the states for teachers and administrators (Hoffman, 2013).

Common core reading, writing and math. A major shift has occurred in the focus of reading and writing with the CCSS. The CCSS places a higher emphasis on the interpretation of non-fiction texts in which students are expected to analyze and make claims to support arguments (Calkins et al., 2012; NGAC & CSSO, 2010). In fact, in grades 6 through 12, the expectation is that 70% of texts used be non-fiction, while only 30% be fiction (Center for Public Information, 2013). The students are no longer “reading to accumulate information” but are instead asked to cite portions of the texts to make inferences and arguments (Calkins et al., 2012).

Along with the focus on interpreting non-fiction texts, an emphasis on cross-curricular writing and academic language has been encouraged through the CCSS (Marzano & Simms, 2013). The three main categories for writing in the CCSS are narrative, argumentative, and informational (Calkins et al., 2012). In all three areas, the expectation is that students will be able to make inferences and draw meaningful conclusions but fully understanding the contents of the text. This approach creates learning environments in which reading and writing are comprehensive across their classes and provides opportunities for teachers to help students in their understanding of texts through the difficult process of analytical writing no matter what subject they may be studying (Calkins et al., 2012). In their study, in which they surveyed teachers across five states, Kane et al. (2016) found that 86% of English teachers reported an increased amount of writing in which students were expected to back up their claims through evidence in the text.

There are three main focuses of the CCSS in math: greater focus on fewer topics; coherence: linking topics from grade to grade; and rigor (NGAC & CCSSO, 2015). Much like the English standards, the emphasis in math is on higher level thinking and depth of knowledge. This requires teachers to ensure that students understand math concepts by being able to articulate and write their understanding (NGAC & CCSSO, 2015). In a study conducted in a large Southern CA district, Fetterolf-Klein (2015) found that teachers feel confident in continuing to make these changes as long as they developed a deeper understanding of the CCSS, were guided by district leaders in prioritizing standards, were given a chance to develop curriculum through trial and error, and were given professional development time to work in teams. This also continues to require a shift in paradigms where simply completing math problems is replaced with an emphasis on students understanding and owning their learning experiences.

Perceptions of common core. The perception of educators has been positive in the acceptance of the CCSS. Studies indicate that teachers in large part embrace the vision and purpose of the CCSS and early reports have indicated that principals and teachers are increasingly comfortable with the shift in instructional approach that the CCSS demand (Kane et al., 2016). Despite the general, positive response to the standards, teachers and principals feel that there is a need for continued professional development and support to accomplish the goals established by the CCSS (Fetterolf-Klein). Studies have shown that teachers only feel “partially prepared” to provide students with the kind of instruction it will require to be successful on state assessments (Kane et al., 2016). In addition to the need for professional development, school districts are worried about the funding that is required to make such necessary changes. More

specifically, the expectation for technology implementation has placed pressure on districts to provide computers for students as well as infrastructure to support technology such as increased bandwidth and software for the computers to function correctly (Dodson, 2015). There continues to be a need on the part of the federal and state governments to provide more than just “one time funds” to support sustainable innovation (Dodson, 2015).

Due to the highly politicized nature of the CCSS adoption, the perception of parents has been largely polarized. In a study conducted in Arizona, Heil (2012) found that parents were concerned about the increasingly narrow focus on math and English in schools and how that affected the overall learning needs of their children. Parents in this study feared that the high stakes testing will continue to prevent the students from being able to take more elective classes where they can acquire skills outside of the core content areas. However, in the same study principals did not feel as strongly about the negative implications of the continued climate of high stakes testing (Heil, 2012). On the contrary, studies have shown that principals are critical to the success of CCSS implementation and understand the focus they must commit to create the vision and modeling the instruction demanded by the new standards (Hoffman, 2013).

SBAC Assessment on Student Progress and Performance

A consortium of state representatives named the SBAC was established following the adoption of the CCSS. The SBAC was awarded federal dollars to create and implement an assessment that aligned with the purpose of the CCSS. The SBAC created a testing system that utilized technology to adapt to the performance of each individual student for state assessments (Smarter Balanced Assessment Consortium, 2016). This

test replaced the paper-based Standardized Testing and Reporting (STAR) test of the NCLB era and was created based on the concept that test questions would get more difficult as students answered correctly and easier when they answered incorrectly. An algorithm was created to identify which of the four strands the students earned: (a) standard not met, (b) standard nearly met, (c) standard met, and (d) standard exceeded (Smarter Balanced Assessment Consortium, 2016). This test was piloted in 2013 and the first assessment was given in 2014. Although some educators believed that the SBAC test was simply another version of high stakes testing that was attempting to help the United States compete globally, the testing across the states was implemented successfully (Stern, 2016).

In CA, the California Assessment of Student Progress and Performance (CAASPP) system was established in 2014 (California Department of Education [CDE], 2016). The CAASPP was created based on the SBAC but also included performance tasks (PT) portions of the test in math and English. The PT exercises are “activities that measure a student’s ability to integrate knowledge and skills across multiple standards” (CDE, 2016, p. 1). The PTs provide students with a lesson that introduces the concept of the PT and is followed by a response done on the computer. All elements of the test are required for students in grades three through eight, as well as in grade 11.

Implications of Common Core

As stated before, the CCSS has placed a new demand for higher level thinking skills in American schools. The standards are based on the latest research on 21st century skills and what students will need to know to be successful in college, career, and life (Common Core Standards Initiative, 2015). The CCSS have created a vision and mission

for schools that aligns with hands-on, real and relevant learning that is directly related to the PBL instructional model (McKnight, 2014). Since the adoption of the CCSS, educational leaders have looked to PBL to provide answers as to what changes in instruction must occur.

PBL

The high expectations of CCSS call for a complete transformation in instructional strategies in schools. The deeper level thinking skills, analytical research, applied knowledge, and 21st century skills addressed with the CCSS have many educators and researchers identifying PBL as the instructional model that best aligns with CCSS (Larmer & Mergendoller, 2015). One of the primary objectives of PBL is to provide students with “usable knowledge” that can be applied rather than simply being recalled (Bransford, 1999). The literature has indicated that students need to learn 21st century skills and are expected to be college, career, and life ready upon graduation (Common Core Standards Initiative, 2015; P21, 2011). PBL has rapidly become recognized as one of the best ways to accomplish these goals (Larmer, 2015).

History of PBL

PBL is by no means a brand new concept in education. Although the technology rich and internet enhanced version of PBL is a much more advanced method for creativity and critical thinking, PBL has roots that trace back to the progressive era of reform in education.

John Dewey. The origins of PBL in American formal education can first be traced back to the theories of John Dewey. In 1894, Dewey became a professor of philosophy, with an emphasis in the field of education, at the University of Chicago

(Kliebard, 1995). It was at the University of Chicago, where Dewey gained fame as a reformer after he established the first Dewey School to implement his theories into practice. Dewey believed that young people needed to be led by their interests and the environment around them in throughout the learning process rather than relying on the hierarchical structures of curriculum that existed at the time (Dewey, 1998). During his time at the University of Chicago, Dewey developed practices that were counter to the established method of schools such as changing the format of age classifications in school to three subdivisions of four to seven year olds, seven to 10 year olds, and 10 to 13 year olds. These students were taught through practical and applicable teaching methods that were relevant and meaningful to them based on the environment they grew up in (Dewey, 1998; Kliebard, 1995). In the progressive era of education, Dewey's theories challenged the status quo and revealed a new perspective on formal education in the United States at that time and beyond (Kliebard, 1995).

In 1904, Dewey left the University of Chicago and took a position at Columbia University. He never again was able to experiment as he did in Chicago, but he did greatly influence William Kilpatrick, who took the next step in the movement to reform (Beinke, 1998).

William Kilpatrick. There were two major factors in molding William Kilpatrick to one day conceptualized the first version of PBL in American history. First, in 1892, long before he enrolled at Columbia University, Kilpatrick had an experience in a class room in Savannah Georgia. In this classroom, the teacher had to leave due to a pressing matter. However, when the teacher left the room and did not return for a long period of time, the students were so engaged in the activity they were participated in, they did not

stop working or even notice that she was gone (Beinke, 1998). This experience gave him an early idea of the impact that hands-on learning can have. The second factor in establishing a philosophy of education that would align to what is now considered PBL was his experience at Columbia University. Kilpatrick worked under progressive teachers who were on the cutting edge of education in their time and none were more influential than Professor John Dewey (Beinke, 1998; Kliebard, 1995).

In 1918, Kilpatrick birthed a notion that would become PBL and was largely based on the early experiments of John Dewey. He released his *Project Method* (1918), which he cited as a “purposeful activity in social environment” (Kilpatrick, 1926; Stevenson, 1922, p. 2). Kilpatrick, who differed from other progressives such as Maria Montessori in his approach, emphasized the need to create growth through activities that lead to more activities and projects that instill a sense of intrinsic motivation with young people (Beinke, 1998). The popularity of Kilpatrick’s *Project Method* (1918) led to increased enthusiasm for progressive education and even led to expanded versions of his work such as Stevenson (1922) *The Project Method of Teaching*. In his writing, Stevenson reemphasized Kilpatrick’s points by organizing the method into reasoning, conduct, natural setting, and priority of the problem (Stevenson, 1922).

The work of Dewey, Kilpatrick, and Stevenson were popular amongst progressives of the time. Ultimately, the more conservative approach won the battle for American formal education, shelving the project method for decades to come. However, the lasting impact of the work of these PBL pioneers was in the fact that the status quo was challenged and many new methods and perceptions of education changed because of their influence (Kliebard, 1995). It was not until the 21st Century, when the new focus on

technology and 21st Century skills were emphasized that PBL in its truest form began to thrive again.

PBL Focus and Expectations

PBL is an instructional model in which students learn skills and content through the experience of working on projects that span an extended period of time in which students are engaged in solving problems based on driving questions (Buck Institute, 2015). Students are active and engaged participants in the experience of learning through real-world contexts, tasks and tools, which often involve (Buck Institute, 2015; Tanner, 2012). PBL involves the development of rigorous and relevant learning activities that call on multiple disciplines, skills, and content areas (Welsh, 2006). This instructional approach seeks to give students voice and choice by allowing them to create projects that relate to their interest areas, their talents, and topics that matter to them in their everyday lives, providing them with a sense of self-motivation (Larmer & Wells, 2015; Pieratt, 2011). The mission and goals of PBL make a complete transformation necessary by the school community, school leaders, teachers, and students.

The basics of PBL. Projects are designed with a focus on student learning goals, state standards, skills, critical thinking and a high degree of inquiry. The projects are most often tied to essential questions or problems to solve (Buck Institute, 2015). The project begins with the teacher explaining the essential question (s), the instructions, expectations, the learning goals and the designated time for feedback and reflection (Lenz & Wells, 2015; Warren, 2016). Collaboration is a key element to project design and helps to create a learning environment of mutual respect and the sharing of ideas (Gordon, 2013). This process helps students grow accustomed to feedback and

independent work as well as promoting intrinsic motivation for students to perform at a high level (Gerlach, 2008). A common mistake in the implementation of PBL is designing projects that simply follow a list of procedures. This can be interpreted as simply “doing project” rather than students engaging in PBL, which requires them to thinking on a higher level (Warren, 2016).

Assessment in PBL. Contrary to the more traditional methods of assessment, PBL requires teachers to assess students in a more holistic, action based format. Often referred to as performance tasks, PBL promotes a process for assessment and feedback based on observation of student work (Lenz & Wells, 2015). Rubrics are used prior to assessment to provide students with expectations and are again used following the performance task or project so that the teacher can provide “holistic, analytical, and descriptive feedback to students” (Harris, 2014, p. 28). This method of assessment provides opportunities to measure their own growth in expanded skills previously learned as well as new skills introduced within their projects (Tanner, 2012). The students are provided with constant feedback from their peers and the teacher, most using rubrics geared toward expected learning outcomes and skills (Lenz & Wells, 2015; Warren, 2016; Welsh, 2006). The rubrics help to provide specific and direct feedback as well as giving the teacher the opportunity to ensure that the project is meeting the skills and content knowledge of the state standards being addressed (Harris, 2014).

The changed role of the student and teacher. The most significant change in the PBL classroom is the change of the role of the teacher from “content-deliverer to content-guide” (Harris, 2014, p. 26). In fact, in some ways, the teachers become more of their “own teacher” as the teacher is an active guide throughout the lesson, requiring the

teacher to be active in the needs of each individual student (Gerlach, 2008; Welsh, 2006). Because of this shift, studies show that students are engaged at a higher rate than in a more traditional setting (Boss, 2015; Bright, 2015; Lund, 2016).

One of the primary tenants of PBL is creating an environment in which students are invested in their own learning (Lund, 2016). The teacher provides choice and plans projects based on student interests and needs (Bright, 2015). This learning environment by the teachers focusing on making real-world connections, share responsibilities for learning, and student input throughout the lesson (Boss, 2015; Lund, 2016; Pieratt, 2011)

Implementation of PBL. Schools today are competing with an outside world in which students are engaged in media and technology rich experiences on a constant basis. These young people have information at their fingertips, leaving education no choice but to consider teaching students in a way that is meaningful to them (Gerlach, 2008). Traditional methods of teaching have involved memorization, repetition, and practice, leaving little room for the application of knowledge (Larmer & Mergendoller, 2015). PBL does not seek to throw out the essential skills of reading, writing, listening, and speaking. Instead the goal is to teach these skills through applied opportunities that revolve around inquiry (Boss, 2015). This requires support, training collaboration, removing barriers to change and planning for challenges with the staff (Larmer & Mergendoller, 2015).

PBL requires the teacher to make major adjustments to their traditional role in the classroom. It involves a shift in the approach to teaching where the focus moves away from the “front of the room” and requires the teacher to foster inquiry through discussion rather than simply grading responses (Harris, 2014; McTighe & Wiggins, 2013). The

teacher becomes more of a guide and colleague than the sole possessor of knowledge (Pieratt, 2011). This requires backward planning in which the teacher spends more time planning the framework for projects beforehand based on essential questions. In other words, the teacher plans for learning outcomes, goals, and strategies based on providing students with the experience of inquiry (Boss, 2015; McTighe & Wiggins, 2013). The teacher has to maintain a perfect balance between a “proactive and reactive mentor” in the classroom (Lenz & Wells, 2015).

Although PBL has proven to be an appropriate instructional approach to accomplish the goals set by CCSS and the Partnership of 21st Century Skills, there are many challenges to full implementation of PBL in schools today (Warren, 2016). Teachers and leaders have to believe that instruction is a “catalyst” for reform in our education system and the PBL offers that kind of transformation (Warren, 2016). One of the major challenges is that PBL represents a move away from teaching strategies that may have been successful for experienced in the past (Harris, 2014). In the past, the focus of teaching was linear, as the teachers used state standards to sequentially “cover the content” (Harris, 2014, p. 25) they were required to teach. However, with PBL, students work “in, through, and around the content” (Harris, 2014, p. 25), focusing on skills more than simply covering content. In a study analyzing the perceptions of teachers in the process of implementing PBL in Texas classrooms, Vega (2011) found that teachers were concerned that the focus on project driven teaching would make it difficult for them to teach everything required for the Texas state exam. These same teachers claimed that having an administrator who was dedicated completely to the

training and support of PBL implementation would help them accomplish the transition to a completely new instructional approach (Vega, 2011).

Another challenge to PBL implementation is the freedom to truly implement the style of teaching. In Vega's study (2011), teachers and administrators felt that the freedom to implement PBL was not given to them, despite the district's indication that they were committed to the change. They cited that in the early stages of implementation, there was too much of a fear that the process of learning the system would have too much of a negative impact on students who were not performing well on state tests (Vega, 2011). Another indication from studies has been that teachers are not "free" to implement PBL because the expectations for student performance outweighed the commitment to provide meaningful training in an embedded classroom format so that teachers can see the process in action (Ott, 2015). In these cases, teachers often abandon the commitment to implementing PBL for fear of failure to meet the requirements of both the district and the state.

Lastly, providing students with an appropriately challenging learning environment has been cited as a challenge to implementation (Tanner, 2012). Teachers have to navigate their planning and instruction with a "degree of ambiguity" based on the development of projects that they and the students are involved in for the first time (Welsh, 2006). This is in large part due to the lack of a replicable and systematic framework provided to teachers at the site and district level (Ott, 2015; Welsh, 2006).

The challenges that surface are not a result of a lack of teacher positive perception and commitment, but rather are a result of the insecurity that teachers have towards implementing such a new and innovative pedagogical approach and the temptation to

revert back to traditional methods of teaching (Ott, 2015; Vega, 2011). Educational leaders have to commit to embrace PBL as a culture and provide a vision that promotes the tenants of PBL schoolwide (Pieratt, 2011). Schools such as the high schools in the New Tech Network and Envision Schools in California have had success in PBL implementation by establishing a strong school culture dedicated to PBL and providing “in-house” professional development that is customized to the needs of the school (Lenz & Wells, 2015; Pieratt, 2011). In some cases, a pilot program is used to create experiences to draw from and leaders at the school site to train other teachers in the PBL pedagogy (Larmer & Mergendoller, 2015). The New Tech High Network, Envision schools and other fully implemented PBL schools dedicate time to creating leadership teams of teachers and administrators to build a shared understanding of PBL. They use these teams to facilitate conducting regular collaboration time to reflect and plan for successful strategies to expand the success of PBL across the school (Larmer & Mergendoller, 2015; Lenz & Wells, 2015; Pieratt, 2011).

PBL and Technology

The revival in the interest in PBL can mostly be attributed to implication created by globalization and the technology revolution (Vega, 2011). Students have more access to information and the ability to connect with others online than ever imagined in the past (Wagner & Dintersmith, 2015; Zhao, 2016). This has had a profound impact on what the expectations for students are in the 21st century (P21, 2105). Technology has made the vision of PBL more applicable and necessary.

Technology enables students to access endless amounts of information and resources. It enables learners to research, collect and analyze data, and participate in

activities that inspire creativity and inquiry (United States Department of Education, 2010). These opportunities provided by technology are directly aligned with the framework of PBL (Buck Institute, 2015).

Teaching and learning in a one to one technology setting. A one to one technology setting is a learning environment in which all students have access to a computer or device. In a study conducted in rural West Virginia, Branch (2014) found that the impact of one to one learning environments provided positive student learning outcomes. Student studies experienced higher levels of rigor and relevance as well as more opportunities for teachers to personalize learning in their classrooms (Branch, 2014). In a study conducted by Gerger (2014) in the Manhattan Beach Unified School District revealed that students, once equipped and trained with their devices were able to become “facilitators of their own learning” (p. 141). The teachers in both studies were able to successfully adjust their instruction to the learning goals and outcomes associated with the real and relevant learning model promoted in PBL. As states are emphasizing the need to enhance and expand technology in school, it will become increasingly important that schools successfully adapt their teaching strategies to match the possibilities of modern technology (CDE, 2016).

Despite the positive perception of technology implementation in school amongst teachers, administrators and community members, there are several challenges associated with making the jump to one to one learning environments. First, funding has been cited as a challenge. In most states, funding has been provided but most of the funding has been only one time funding, leaving the challenge of finding sustainable solutions for technology (Dodson, 2015). Most districts have established new budget practices in

which budgets have been repurposed for the sake of being able to update technology and infrastructure (Mauney, 2014).

Another challenge has been the professional development and structural support of teachers. One of the most significant challenges cited in a study of New Tech High School was that there were limited resources for software and professional development outside of the school site (Freshwater, 2009). The study in the Manhattan Unified School District also indicated that the initial one to one implementation was “hectic” because there were a variety of unanticipated challenges such as network connections, dysfunctional devices, and classroom management (Gerger, 2014). Despite these challenges, studies show that the impact of technology, although too early to determine if it leads directly to student achievement on state tests, have had a positive impact on the learning goals of the school (Freshwater, 2009; Gerger, 2014; Mauney, 2014).

Implications of PBL

Research indicates that PBL is providing teachers and students with the opportunities necessary to prepare young people for the globalized world (Wagner, 2008). A continued focus on creating school cultures in which PBL is engrained in the conscience of students and teachers will help to make the transition effective in schools (Pieratt, 2011). However, this large-scale transformation will require leaders to implement TL to accomplish the lofty goals of CCSS and PBL.

TL

Leadership in a traditional sense has often come from title and position. TL is a style of leadership that is intended to dismantle the notion that leaders can simply command commitment from followers by enforcing their authority (Kouzes & Posner,

2006). Instead, TL is a “partnership to reach a higher level of trust, motivation, engagement, and empowerment” (Shelton, 2012, p. 78). According to Anderson & Ackerman-Anderson, 2001)TLs “unleash the human potential” (Anderson & Ackerman-Anderson, 2001, p. 17) in their organizations by gaining a true understanding of strengths and weaknesses and developing systems in which to maximize the effectiveness of individuals (Anderson & Ackerman-Anderson, 2001). They develop a clear vision based on the needs and abilities of the organization and create specific plans to accomplish the vision (Dobbs, 2010). TL requires a leader who is willing to put the organization needs first and ensure that the team members have everything thing they need to be successful including morale, readiness, and emotional conditions (Anderson & Ackerman-Anderson, 2001).

The Characteristics of TL

Shelton (2012) identifies six common behaviors that are found in TLs: “Inspiring others with a shared vision for the future, leads by example, encourages employees to work as teams, sets high standards, is respectful of individual feelings, and is intellectually challenging” (p. 205). These characteristics can be broken down even more into 10 domain of TL which include: visionary leadership, collaboration, diversity, team building, character and integrity, problem solving and decision making, personal and interpersonal skills, communication, political intelligence, and creativity and sustained innovation (Larick & White, 2012). These domains will be used in this study to identify how leaders utilize successful practices in each of the categories.

TLs establish a culture and mindset for success in their organization to “unleash the potential” of team members (Anderson & Ackerman-Anderson, 2001; Dobbs, 2010).

This type of leader has core values, a strong knowledge of self, and a willingness to develop trusting relationships by opening up lines of communication (Kouzes & Posner, 2006; Tabrizi & Terrell, 2015). Lastly, a TLS has to be willing to take risks, learn from failure, and make strategic adjustments based on what they learned (Gardner, 2011).

TLS are able to gain influence by attending to the needs and desires of the individuals within an organization. Lasting success depends on whether the leader is liked by the followers in the organization because individuals will want to volunteer to participate in strategic plans for change and progress (Kouzes & Posner, 2006). Leaders such as Martin Luther King Jr. were able to gain influence by reaching a wide audience through his appeal to the betterment of humanity in general. He could have focused solely on the African American community, but as a TL he understood that there was greater power in a wider audience (Gardner, 2011). TLs demonstrate these characteristics over their career and are successful in making transformational change for their organization.

Transformational change. TL can be defined as a “second order change” as opposed to a “first order change” found in transitional change (Anderson & Ackerman-Anderson, 2001). The difference is that TL involves a shift in the fundamental core of the organization rather than a more basic change to the same old processes and procedures (Anderson & Ackerman-Anderson, 2001). What is often disguised as transformational often only makes small changes to the organization that do not require major change in the everyday lives of the individual team members. A TL has to have “foresight and hindsight” as well as an introspective mindset to not only envision the change but to carry it out (Anderson & Ackerman-Anderson, 2008; Dobbs, 2010).

Transformational change is a major need for schools to meet the expectations of the globalized world, CCSS, and PBL. TL can provide the vision and strategies necessary for this change.

The Principal as a TL

The principal has to provide leadership for teachers through a process of learning, facilitating, and supporting teachers as partners in the process of transformation (Fullan, 2014). The vision for the success of students starts with the principal aligning the vision and mission to their core values and living those values out each day (Zapeda, 2003). As TLs, principals are willing to take risks in order to accomplish the clearly stated goals that they provide for the school (Fullan, 2014). The vision that principals establish gives direction to the staff and the mission they set out on provides the purpose that the staff look to on a daily basis (Zepeda, 2003). Principals as TLs are necessary to accomplish the lofty goals previously mentioned in the literature.

In numerous studies on the perception of the role of principals, teachers cited the ability of a principal to support, guide, and encourage the growth of their teachers as one of the most important factors for success (Else, 2013; Espinoza, 2013; Sicina, 1996). The way in which principals accomplish these goals are through articulating the vision of the school, evaluating classroom instruction, providing instructional support for differentiated instruction in the classroom, providing professional development, and making the goals of the school visible and known (Else, 2013; Espinoza, 2013; Sicina, 1996). Fullan (2014) explains that the most important job of the principal is to maximize the “professional capital” (p. 73) of their teachers so that success is repeated and expanded over time.

Characteristics of transformational principals (TP). There are three primary categories that have been identified as the characteristics of TPs. The first is that TPs hold high expectations for their staff and students (Espinoza, 2013). Studies have shown positive results from principals that provide specific feedback, an ever-growing toolbox of teaching strategies, and a commitment to change for the improvement of the school (Espinoza, 2014; Laing, 1989; Witmer, 2005). The TPs are constantly informally observe the learning in classrooms and creating a dialogue around what is working and which areas require growth (Zapeda, 2003). TPs cannot simply rely on statements or programs for change to actually created transformational change in the organization. They are the ones that are responsible in carrying out that change through their strategic planning and emphasis on goals for teachers (Witmer, 2005).

The second characteristic found is the clear vision and the inspiration that the principal provides to the staff. Witmer (2005) found that the setting of clear goals and vision are high among the characteristics of effective schools. Principals who establish these results are determined to motivate their teams to be successful by having a strong positive presence on the school campus and seeking ideas from other schools that can be applied to his/her site (Fullan, 2014). Principals that are most effective, foster a shared vision and consistently relate the initiatives and procedures implemented to the vision to provide the staff with purpose (Espinoza, 2013).

The third characteristic most often found is the principal as an involved instructional leader. TPs provide consistently instructional support and establish teacher efficacy by providing research based methods by which to implement state standards, content material, and skills (Witmer, 2005). The principal has never been more needed in

the area of providing a framework for change in instructional practices so that teachers are better equipped to meet the expectations of the CCSS (Witmer, 2005). TLs help to empower their staff by holding high expectations, building relationships, and providing them with opportunities to be part of the planning (Shelton, 2012; Zapeda, 2003). These characteristics among others make the task of becoming a TP a difficult one. With increasing pressures on schools to perform, the demands of the principal have never been higher (Dixson, 2005).

The Demands of the Principal

Expectations of the principal have shifted in the last few decades from the idea that principals were simply managers of the school to the current frame of thinking which involves the principal as a manager, instruction leader, and visionary (Wallace Foundation, 2013; Witmer, 2005). In a study conducted with a number of principals from Pennsylvania, Markley (2008) found that principals feel pulled in multiple directions outside of instructional leadership including special education requirements, discipline, parent and guardian issues, and teacher evaluations. Unforeseen daily activities and incidents fill up the principal's time, making a framework for success necessary for the principal to be effective (Markley, 2008).

Principals of effective schools. Effective schools are led by principals who have a clear vision and place a higher value on the creating a positive culture over strategy (Daggett, 2015). The Wallace Foundation (2013) has found five responsibilities of effective schools, which include: “(a) providing a vision of academic success for all students, (b) creating a hospitable climate, (c) building leadership in their team, (d) constantly helping to improve instruction, and (e) evaluating data to analyze

improvement” (p. 14). In a study involving 43 school districts, it was discovered that high achieving schools are led by principals that ask for input from stakeholders, work collaboratively with teachers, and share influence with teachers on matters of instruction, goals, and school culture (Louis, Leithwood, Wahlstrom, & Anderson, 2010). These TPs take an active role in best practices of curriculum, instruction, and assessment through collaboration with teachers rather than simply through evaluations (Dufour & Marzano, 2011; Marzano, Waters, & McNulty, 2005). In fact, with the increased demands on the time of principals, it has become completely necessary that principals delegate responsibilities to teachers. This requires effective team building and the growth of teacher efficacy (Espinoza, 2013).

Teacher observation and evaluation. The principal is the most influential person in the field of education (Wallace, 2008). The principal is responsible for understanding and responding to the needs of the staff above their own. This practice is often referred to as servant leadership (Farmer & Gabriel, 2012). Principals have to stay attuned to the needs, trends, and characteristics of their school and staff to create a culture of constant improvement (McKee & Boyatzis, 2008). An effective way to create this kind of atmosphere is through instructional rounds (City, 2009). Instructional rounds involves a team of administrators and teachers observing classrooms across the campus with specific goals and things to look for in mind (City, 2009). This process helps to establish what Dufour & Marzano (2011) refer to as results-oriented collaborative teams, which drive constant improvement.

State standards implementation. Principals are the key to professional development at their sites. They are responsible for establishing a system for curriculum

and assessment that aligns to CCSS and can provide data to inform instruction (Dagget, 2015). The CCSS requires schools to identify priority standards and develop curriculum based on content knowledge and skill required by the standards (Common Core Standards Initiative, 2011). The principal is held accountable by the state and the district to prepare their schools for this despite the fact that the standards are still new (Markley, 2008). It is important that school districts and county offices of education provide administrators with the tools to be successful transformational leaders in the era of CCSS.

Implications of the demands on the principal. The demand on principal is higher than ever before and the importance of that role has increased since the emphasis on accountability through state standards (Witmer, 2005). Studies have shown that teachers look to principals to set the tone and the vision of the school as well as provide supports to them instructionally, organizationally and culturally (Espinoza, 2013; Markley, 2008; Witmer, 2005). TPs focus their efforts on the influence they have within their organization and promote a mindset that the vision they have created will be accomplished under their leadership (Witmer, 2005; Dufour & Marzano, 2011). This process will help shift the paradigm from “what is taught” to “what is learned” (Dufour & Marzano, 2011). This is the only way that the ambitious goals of CCSS and PBL can be accomplished.

Research Gap

The last few decades have produced that fastest rate of technological advancement in history. Globalization and the technological revolution have transformed the world economy as well as the future of work. This has a direct impact on our

students in schools today. It is necessary that schools change the way that curriculum, instruction, and culture are approached.

Schools have failed to make change at the rate that the world has changed. While students have access to unprecedented amounts of information at their fingertips with mobile devices, they have been forced to learn in environments that are restrictive and limiting to their growth. Schools must supply students with the technology it takes to be innovative and creative. They must implement 21st century skills into the curriculum to allow students to develop into successful young people in today's global economy.

The adoption of CCSS across the states has placed an emphasis on college and career readiness as well as 21st century skills (Common Core Initiative, 2011). This involves a complete shift in the way that teachers were operating in the NCLB era. PBL represents the framework for students to successfully learn in the manner in which CCSS requires as well as preparing them for the world outside of schools. This process of implementation will require principals to use transformational change as TLs. The principals must provide the vision and steps to successfully reach the goals of CCSS and PBL.

Research has provided a background on global and domestic trends, CCSS, PBL, and TL. However, there has yet to be research conducted to provide information on how TPs at PBL school have implemented both PBL and CCSS in a way that leads to high rates of student achievement. This study will help reveal successful methods used and will provide principals with a framework for making these necessary shifts as TLs.

Summary

The purpose of this literature review was to examine the growing needs of education allows us to further examine the direction of state standards, the basis and framework for PBL, and the role of the high school principal as a TL in meeting the needs of students in the modern era. Four areas were analyzed in relation to the RQs: (a) crisis in education and the need for change; (b) common core; (c) PBL; and (d) TL. Chapter II explores the phenomenological methodology used to conduct this qualitative study. Chapter IV presents the results and analysis of the RQs. Chapter V concludes with conclusions and implications for further research.

CHAPTER III: METHODOLOGY

Overview

This chapter outlines the research methodology used in this study. Included are one RQ and two Sub-RQs and a purpose statement that explain the topics explored and the reason for the study. This is the articulation of the research design, population and sample, data collection instruments and procedures and the analysis of the process. This chapter will end with the limitations and a summary of the methodology.

Purpose Statement

The purpose of this phenomenological study was to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 CASSPP test as analyzed through the lens of the 10 domains of the TLSi

RQ

The RQ was: *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?*

Sub-RQs

- 1) How do secondary principals at high performing project based learning schools use the 10 domains of transformational leadership to create a culture of success in their schools?
- 2) How have the transformational leadership characteristics of secondary principals at Project Based Learning schools led to high levels of student achievement?

Research Design

The research design implemented in this study was a qualitative study design. This study involves looking at leadership through the reflection and insight provided from the leaders themselves. Qualitative research focuses on experience of people for research through interviews, observations, and written documents that provide details to provide insight into the subject being studied (Patton, 2014). Principals of high performing, PBL high schools will be the focus of this study as they will provide the essential information of their lived experiences to draw conclusions from.

This study was a phenomenological study. Phenomenological methodology starts with looking at a population that demonstrates a specific phenomenon through the lived experiences of the participants. A phenomenological study cannot be conducted unless there is a clear phenomenon that exists before the RQs are designed. This phenomenon was the basis for the RQs as the questions are intended to discover why and how the phenomenon exists within the population being studied (Patton, 2014). This study placed a focus on the phenomenon of high achieving PBL schools (schools performing at 65% meeting and exceeding standard in math or English on the CAASPP). The phenomenological approach looked at the lived experiences of the principals of these schools to explain the phenomenon of high achieving PBL schools. This qualitative methodology effectively addressed the purpose of the study and the questions and allowed the researcher to find conclusions as to why the phenomenon exists.

The primary driving method of data collection in a phenomenological study was the in-depth interview. This requires the researcher to be skilled in this area in execution of the interview, collection of the data, and organization of the data (McMillian &

Schumacher, 2010). The process required an extensive amount of interviewing with candidates. The success of the study depended on successful use of the interview and the researcher as an instrument.

Population

Creswell (1998) defined a population as “a group of individuals who comprise the same characteristics” (p. 644). Thus, a population can be any size and come from any particular area.

There are 10,366 schools in CA consisting of K-12, Middle School, High School, Continuation School and Community Day School. Of those 10,366 schools, 1,325 of them are comprehensive high schools (CDE, 2014). At each site, there is a site administrator, typically with the title of Principal. The principals of the 1325 Comprehensive High Schools in CA were the overall population for this study.

Target Population

A target population for a study was the entire set of individuals chosen from the overall population for which the study data were to be used to make inferences. The target population defines the population to which the findings of a survey are meant to be generalized. This definition determined the eligibility of the participants of the study (Cox, Geisen, & Green, 2008).

Out of the 1,337 high schools in CA, there are 25 PBL high schools. The principals of the 25 PBL high schools in CA are the target population for this study. PBL schools are defined as schools that use PBL as the primary instructional model throughout the school in all subject areas. These schools have PBL written into their

mission or vision, or have PBL identified on their website and school description as a driving factor in instruction at their school. These schools include:

- American Canyon High School
- American Canyon Middle School
- Anderson New Technology High School
- Applied Technology Center High School
- Bonsall New Tech High School
- Central Coast New Tech High School
- Da Vinci Charter Academy
- James Lick High School
- Los Angeles School Of Global Studies
- Los Gatos High School
- Napa High School
- Sacramento New Technology High School
- New Technology High School
- Samueli Academy
- Seaside High School
- Minarets High School
- Impact Academy of Arts and Technology
- Napa Junction Magnet
- High Tech High
- High Tech International High
- High Tech Media Arts

- High Tech North County
- High Tech Chula Vista
- City Arts And Technology
- Envision Academy

Sample

A sample is defined by Krathwohl (2009) as a subset of a larger group representing the whole. The sample is the subgroup of the target population the researcher plans to study. Ideally, the sample of individuals is representative of the entire population (Creswell, 1998; Fraenkel & Wallen, 2009).

The sampling process used for this study was purposive. Crossman (2016) defines a purposive sample as a non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling.

The sample of this study was taken out of the target population based upon specific criteria. In order for the schools to meet the criteria for high performing, they have to score 65% meeting standard and exceeding standard in Math or English on the first year of testing on the CAASPP. The high schools were identified as PBL based on the fact that these schools have PBL written into their mission or vision, or have PBL identified on their website and school description as a driving factor in instruction at their school. There are eight high schools in CA that are both PBL schools and that met the CAASPP testing criteria. The principals from those eight high performing PBL high schools were the sample for this study. One of the principals for this study declined to return the invitation. The schools that meet the criteria include:

- Impact Academy of Arts and Technology
- Da Vinci Charter Academy
- Central Coast New Tech High School
- New Technology High School
- Anderson New Technology High School
- High Tech High
- High Tech High Chula Vista
- High Tech High International School

Sample Selection Process

The participants of this study were chosen using these factors:

- The interview participant had to be principal of a PBL high school. This study focused on the role of TL by the high school principal and required that only these principals be participants in the interview process. The criteria set for determining whether or not the high schools could be defined as project based was contingent on two elements:
 - a. First, the school had to have PBL instruction written into their mission, vision, or their school description on the home page of their school website.
 - b. The second element required was that the school had to show evidence of school-wide implementation of PBL at their school on their website through student projects examples, description of projects, teacher websites, or articulated instructional resources such as rubrics or project design templates.

- The other determining factor was student achievement on the initial CAASPP.

The principals selected had to be leaders of schools that scored above 65% meeting standards and exceeding standard on the CAASPP. There are four bands of student performance, which include: (a) did not meet standard, (b) nearly met standard, (c) met standard, and (d) exceeded standard. The state average for English Language Arts was 56% meeting and exceeding standard and in math the state average was 29% meeting and exceeding standard. Each participant in this study had to be a principal of a PBL high school that performed at these levels on the initial CAASPP in 2015.

The selection process occurred as follows:

1. Once schools meeting the selection criteria were identified, the principal of each school was contacted to secure their participation.
2. After participation was secured, each participant was mailed the informed consent documents confirming their participation in the study and assuring that their privacy would be maintained.
3. Following the receipt of informed consent documents, interviews were scheduled with each participant.

Instrumentation

Qualitative research design was the approach used in this study. Qualitative research requires the researcher to use inquiry to draw conclusions based on the meaning of the participants in the study (Creswell, 1998). Through conversations and observations, the qualitative approach focused on the lived experience of the participants by placing the researcher in a natural setting with the participants (Patton, 2014). This

qualitative study was driven by interview dialogue between the researcher and the participants in regards to TL, PBL, and student achievement.

The researcher chose participants based on the three factors of (a) high school principals, (b) PBL schools, and (c) schools that met the achievement criteria on the first round of the CAASPP. Participants who were selected according to this criteria were provided a Letter of Invitation (see Appendix B), which described the interview process and the purpose of the study to the participants and their respective schools and districts. Once the letter was received, the research explained the content of the letter to participants as well as explain the Informed Consent Form (Appendix C) and the Brandman University Institutional Review Board (BUIRB) Participant's Bill of Rights. The consent packet provides participants with all of the essential information for participation such as the explanation and purpose of the study, research design, and confidentiality agreement. These elements were necessary to ensure that a quality research design and informed consent are in place for each participant to agree to their role in the research.

The qualitative phenomenological portion of the research employed the researcher as the instrument. The researcher had to continually be aware of his personal behavior and attitudes to assure that they did not influence the respondents in any way. Data were collected from seven principals from high performing PBL schools. According to Turner (2010), "Interviews provide in-depth information pertaining to participants' experiences and viewpoints of a particular topic" (p. 754), and Patton (2002) stated that interviews "begin with the assumption that the perspective of others is meaningful, knowable, and able to be made explicit" (p. 341). In this case, the interviews provided in-depth

information about how the principals perceive that the 10 dimensions of TL impact success at their schools.

The researcher created interview questions as the primary instrument for data collection in the study (see Appendix D). The interview questions were created using the 10 domains of the TLSi as the basis for the questions.

Reliability

Joppe (2000) defines reliability as,

The extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability, and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. (p. 1)

The TLSi, upon which the interview questions were based, has a documented reliability history. Zardo (2015) statistically analyzed the performance of each domain and associated items Zardo found that the combined research of Larick and White (2012) established a strong instrument that is a reliable tool as a 360-degree assessment of leadership qualities. The 10 domains selected in the evaluation tool provide a holistic notion of leadership from an introspective and external angle. According to Zardo (2015), “item to domain correlations are all moderate or strong relationships (448 or higher)” (p. 44). Results of the domain item average comparisons to the overall rating reflect a correlation coefficient of 0.7 or higher (Larick & White, 2012).

The 10 domains of the TLSi are a reliable base from which to develop an interview questionnaire.

Field Test

To ensure the reliability and validity of the study, the interview questions were field-tested. An individual agreed to help with the pilot test and who had leadership experience in a PBL environment participated by being interviewed by the researcher using the proposed process and questions. Feedback was received from the participants regarding clarity of the questions, understanding of terms, and overall user friendliness. In addition, an observer followed the process and provided feedback as to the consistency and behavior of the researcher throughout the process as a means to mitigate researcher bias. This was used to modify and adjust any items or procedures that needed to be changed in order to reach maximum reliability and validity. The pilot interviewee felt that the process was thorough, clear, and direct. The only suggestion was to combine the two parts of each question into one question. This feedback

Validity

Validity is the measure by which the study tests what it claims to be testing (Joppe 2000). The first step in establishing validity is ensuring that the RQs align with the interview questions. The interview questions are driven by the 10 domains of the TLSi as it relates to student achievement and PBL in CA high schools. The TLSi is both a reliable and valid instrument (Zardo, 2015). Therefore, as a basis for developing valid questions, the TLSi is an excellent platform.

The first way in which validity was established is by ensuring that the interview was congruent with these factors by designing the questions in line with the three factors of TL, PBL, and student achievement. The second way that validity was established through the consistency of the interview approach, using the same equipment and method

by which the interview is conducted. The last way is ensuring that the interview was translated word for word and coded into categories that reflect a true interpretation of the interview process. These three measures established validity in the study.

Data Collection

No data were collected for this study until approval to conduct the study was received from the BUIRB. All participants signed Informed Consent and were given assurance that all data collected for the study would remain confidential.

The researcher created interview questions as the primary instrument for data collection in the study. The interview questions were created using the 10 domains of the TLSi as the basis for the questions. In a phenomenological study, the focus of the interview is on the meanings of the lived experience of the participant and how that plays a role in the phenomenon (McMillan & Schumacher, 2010). In this study, the participant is a high school principal and the phenomenon is high achieving PBL schools. The interviews are centered on the lived experience of these principals and how these factors influence the phenomenon of high academic achievement.

The participants consisted of seven different principals of PBL schools across the state of CA. Each principal was chosen based on the criteria met as a PBL school as well as a high school that met the criteria for achievement on the CASPP. The researcher ensured that the participants are fully aware of their involvement in the study and what the intentions of the study were.

The phenomenological interview approach was applied in this study. Phenomenological interviews intend to find the meaning of the lived experience of the participant. In addition to the in-depth interviews with each participant, the researcher

will write a reflection on their own experience with the phenomenon and combine it with the experience of the participants (McMillan & Schumacher, 2010). This interview approach requires that the participants be able to describe their experience in an open ended format of in-depth questioning. The interview consisted of 10 questions and subsequent questions, if the participant desired, for each participant.

The interviews for each participant were scheduled and conducted in-person when possible. If a face to face interview was not possible, interviews were scheduled via telephone. All interviews were recorded, with permission of the participant, and field notes were also taken by the researcher.

Data Analysis

Data collected in a qualitative study is substantial and the process by which to organize and analyze the data can be tedious without an established purpose and method that works well with the study (Patton, 2014). In this study, the interviews and the verbatim transcription of the interview responses by each participant were accomplished by the primary investigator. Interviews were recorded and transcribed following the interview and confidentiality was maintained throughout the study.

Individual Analyses

Once the transcription occurred, the researcher coded the data, using the RQs as a framework for the coding categories. The RQs, which centered on TL, PBL, and student achievement, guided the direction of the questions. The data for each individual was organized in a synthesis matrix to enable clear and concise analysis of the data by each RQ. The 10 domains of TL were used as a resource to create the questions, thus the

responses will not only be coded according to the questions, but will also use the domains as a reference for codes.

Inter-Coder Reliability

Steps for coding were modeled after the coding process outlined by McMillian and Schumacher (2010). After each interview, the content was transcribed word for word. Once all of the interview responses are collected, codes were created based on the responses and the data was placed into a data frequency matrix by code and domain. The coding was checked by another researcher to ensure alignment and thorough coding categories as well as organization and to insure against researcher bias.

Composite Analyses

The data for each individual was organized into a composite synthesis matrix to enable clear and concise analysis of the data and identification of themes and patterns by each RQ. The 10 domains of TL were used as a resource to create the questions, thus the composite responses will not only be coded according to the questions, but will also use the domains as a reference for codes.

Inter-Coder Reliability

The composite coding was checked by another researcher to ensure alignment and thorough coding categories as well as organization and to insure against researcher bias. This coding process was used to draw conclusions.

The researcher has successfully completed coursework in qualitative research methods and design and has an understanding of the process. Confidentiality was maintained through a strict process of data collection and protection. The data will be

saved under the care of the researcher under the length of time set forth in the criteria of the BUIRB.

Limitations

One of the primary limitations of the study was the small sample size. There are not many PBL high schools in CA. There are even less that met the criteria for high achievement on the CAASPP. This created a small pool to choose from considering each of the schools that were chosen has only one principal.

In a qualitative study in which interviews are the instrument of data collection, the study is not controlled. The participants are free to respond to the questions as they wish despite the emphasis by the researcher of honesty and thoroughness of answers. As opposed to a quantitative study in which the environment is more controlled and less personal, the study is more difficult to ensure objectivity throughout.

The criteria using CAASPP as the measure of achievement was a limitation due to the assessment being new. The study involved schools in which the first round of CAASPP was an indicator of high student achievement. There may be other factors that determined results on the assessment rather than the competency of leadership in the schools that scored at the highest rates.

Although steps were taken in both the Data Collection and Data Analysis portions of the study, the researcher is an interested party for the subject of the study and some bias may be reflected in the study.

Summary

This chapter described the research design and processes for the study. The purpose and the RQs were detailed as well as the population and sample of the study.

The data collection and analysis procedures were described and the limitations of the study were identified. Chapter IV will present the results of the study and Chapter V will identify the conclusions of the study as well as the implications for action and further research.

CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

This qualitative phenomenological study explored the lived experiences of principals of high performing PBL schools in CA. The 10 domains of TL were used in the interview process to identify common themes and characteristics of the participants. The purpose, RQs, methodology, data collection procedures, and population and sample are described in detail, followed by a summary of the data collected in the study.

Purpose Statement

The purpose of this phenomenological study was to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 CASSPP test as analyzed through the lens of the 10 domains of the TLSi.

RQs

The RQ was: *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?*

Sub-RQs

- 1) How do secondary principals at high performing project based learning schools use the 10 domains of transformational leadership to create a culture of success in their schools?
- 2) How have the transformational leadership characteristics of secondary principals at Project Based Learning schools led to high levels of student achievement?

Research Methods and Data Collection Procedures

Each participant in the study was asked 10 questions in the interview process. In alignment with the RQs, the participants were asked how they used each domain of TL, followed by how the use of each domain led to higher rates of student achievement. The interviews were conducted over the phone and were recorded. Once the interviews were recorded the researcher transcribed them. Following the transcription of each interview, the researcher used the coding process to find themes in each question as well as themes throughout the entire interview. The coding and the identified themes were used to draw conclusions in the study.

Population

Creswell (1998) defined a population as “a group of individuals who comprise the same characteristics” (p. 644). Thus, a population can be any size and come from any particular area.

There are 10,366 schools in CA consisting of K-12, Middle School, High School, Continuation School and Community Day School. Of those 10,366 schools, 1,325 of them are comprehensive high schools (CDE, 2014). At each site, there is a site administrator, typically with the title of Principal. The principals of the 1325 Comprehensive High Schools in CA were the overall population for this study.

Target Population

A target population for a study was the entire set of individuals chosen from the overall population for which the study data were to be used to make inferences. The target population defines the population to which the findings of a survey are meant to be

generalized. This definition determined the eligibility of the participants of the study (Cox et al., 2008).

Out of the 1,337 high schools in CA, there are 25 PBL high schools. The principals of the 25 PBL high schools in CA are the target population for this study. PBL schools are defined as schools that use PBL as the primary instructional model throughout the school in all subject areas. These schools have PBL written into their mission or vision, or have PBL identified on their website and school description as a driving factor in instruction at their school.

Sample

The sampling process used for this study was purposive. Crossman (2016) defines a purposive sample as a non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling.

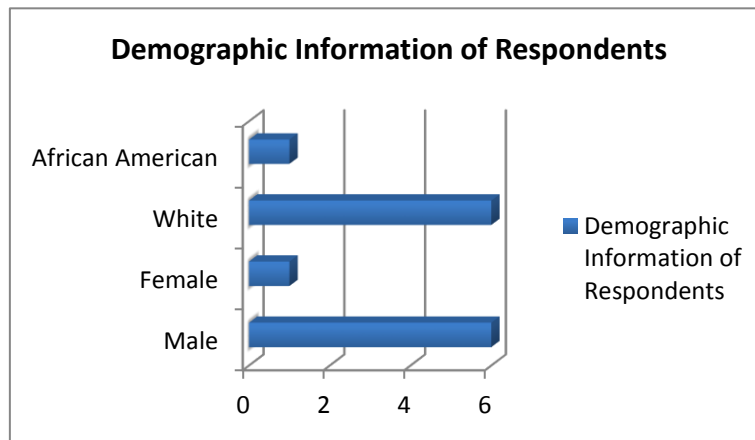
The sample of this study was taken out of the target population based upon specific criteria. In order for the schools to meet the criteria for high performing, they have to score 65% meeting standard and exceeding standard in Math or English on the first year of testing on the CAASPP. The high schools were identified as PBL based on the fact that these schools have PBL written into their mission or vision, or have PBL identified on their website and school description as a driving factor in instruction at their school. There are eight high schools in CA that are both PBL schools and that met the CAASPP testing criteria. The principals from those eight high performing PBL high schools were the sample for this study. One of the principals for this study declined to return the invitation.

Demographic Data

There were seven participants in this study. There were eight participants that met the criteria, however one of the principals that met the criteria did not participate in the study despite the efforts of the researcher. Of the seven participants, there were six male participants and one female. There were six participants identified as Caucasian of Non-Hispanic descent and one identified as African American. Each participant was between the ages of 30 and 60 years old. Table 1 represents the demographic information of the participants in the study.

Table 1

Demographic Information of Respondents



Presentation and Analysis of Data

The findings that are presented in this chapter are a collection of themes from the responses of participants in this study. The themes discussed represent the lived experiences of transformational leaders in high performing PBL schools. Qualitative data collected from personal interviews provide the basis for findings. The major themes and findings are presented in relation to the RQ and Sub-RQs.

Results for the RQ and Sub-RQ1

The RQ for this study was: *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?* The first Sub-RQ for this study was: *How do secondary principals at high performing project based learning schools use the 10 domains of transformational leadership to create a culture of success in their schools?* All participants were asked the same 10 questions which were based on the 10 domains of TL.

Following the seven interviews, all of the content was transcribed and coded. There were two methods of coding for the interviews. The first method was to code by question and domain. This method was used to address the RQ and the first Sub-RQ. The second method was to code the interviews as a whole to find common themes. This method was used to address the Sub-RQ2, which will be addressed later in this chapter.

For this study, to be considered a major theme, at least five out of the seven respondents had to reflect the theme in their response. If a domain did not have a response that met the major theme criteria, moderate themes were identified which were constituted by four of the seven respondents citing the theme. For each domain of TL, major and moderate themes were identified in the responses of the participants. By developing the interview questions off of the RQ and the Sub-RQ1, findings and conclusions were drawn.

Visionary Leadership

Table 2 represents the major themes identified for visionary leadership after the transcription and coding of interviews were completed. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 2

Visionary Leadership Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Shared sense of vision and mission.	7/7	I feel that our staff because we are a small school, we actually work as a team and that we agree on what our mission and vision is.
Creating a common language for teaching and learning.	6/7	I feel like everyone one, all of the staff and faculty, they all speak the same language and they all buy into the mission and therefore they just have, the kids keep hearing the same message over and over again. And it just allows them to be better.
Vision is derived from a shared group of schools.	5/7	I think the vision, we have 13 schools in the high tech high network. The vision comes from high tech high.
Teachers collaborate and discuss topics related to the vision.	6/7	We have a grade level leads and instructional leads and they serve with an equity leadership team where we look at the whole school and what we are working together for PD to make sure they are getting what they need so we can provide students with what they need.
Promotion of shared or distributed leadership.	5/7	Visionary or aspirational leadership has to be met with how does that get held by the collective whole because the teams are much more important than any one individual's contribution in a social entity like a school.

Shared sense of vision and mission. All of the respondents cited having a shared sense of vision and mission as a practice under visionary leadership. The respondents all

referenced the fact that there was a strong direction that they were all heading in and the goals of the organization were clear. One of the principals summed this idea up by saying:

When I see the visionary leadership definition, what I see is the word clear mission and what that makes me think is having been a teacher, administrator, and instructional coach at Da Vinci, it is very clear to me that all of the teachers at our school and staff understand the type of school this is supposed to be.

This shared vision and mission of the staff was a common thread that reoccurred throughout the interviews, indicating that the tie to a shared sense of purpose was critical for transformational leadership. The respondents made it clear that the dedication to the vision was more important than dedication to the leader themselves.

Creating a common language for teaching and learning. There were six out of seven respondents who felt that a common language specific to the school site was an important aspect of transformational leadership. Whether it were acronyms that stood for processes or pledges that represented school wide expectations, there was close attention paid to common language. Principals in this study found it critical for students to hear reoccurring themes and concepts that went beyond subject area to reinforce the vision and mission of the school.

The vision is derived from a shared group of schools. A major theme that was not surprising in the context of vision and mission was a connection to a vision shared by a group of schools. Five out of seven respondents alluded to this connection. The New Tech Network of schools and the High Tech High group of schools make up a majority of the participants in this study. Only one school represented in this study is not part of one

of these networks. Therefore the interviews reflected a connection of vision and mission to these networks. Despite that fact, the principals indicated that the vision of the network was their basis, however they had a more specific vision and mission to their schools.

Teachers collaborate and discuss topics related to the vision. Six out of seven of the respondents mentioned the practice of teachers collaborating around themes related to the vision of the school. One participant conveyed this by stating:

So for me the approach that I have tried to take is really making the vision our day to day. What I mean by that is that we try to be constantly challenging what our definition of what PBL is, so we have explored strategies about how to improve that in the classroom but we spend a lot of time digging deep in defining what PBL mean for New Tech High.

The participants that mentioned this theme were committed to continuous discussion of how curriculum, instruction, assessment, and collaboration could be related to the vision of the school. This theme had some consistencies with the idea of shared leadership in that the teachers on the staffs of these leaders were active in communicate how daily practice was used to further the implementation of the vision and mission.

Promotion of shared or distributed leadership. This was another strong theme in the category of visionary leadership. A majority of participants (6/7) emphasized the necessity of utilizing teacher leaders and groups to communicate, refine, and carry out the vision and mission of the school. One participant clearly summed this up by stating:

If you have a vision that you can share with other folks that are responsible for carrying out the vision that is essential in making the school work. Its partnering

the visionary leadership part with having a team of teacher leaders who are closest to the work and then being open to ways of achieving a vision that I might not be able to come up with on my own.

A majority of the respondents consistently credited their effective leadership as individuals to the success of the leadership qualities of their staffs. Whether it was a formal advisory of leadership team or an informal practice of including team members in the decision making process, this was a strong theme in the practice of visionary leadership.

Collaboration

Table 3 represents the major themes identified for collaboration after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 3

Collaboration Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Empowering the staff and allowing a voice.	6/7	We had to collaborate to be successful in term of we met on a weekly basis, we talked all the time. We decided things in the decision making model. My teachers were my leadership team and as we got bigger they became my leadership team. I very rarely made school decisions alone.

(continued)

Table 3

Collaboration Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Daily, weekly, or regular meetings with staff and teams.	6/7	Three years ago we moved to an embedded PCL model. So essentially what that means is we have a 7 period day and teachers teach five, have their prep, and then have a content area PLC period that day.

Empowering the staff and allowing a voice. Six out of seven respondents felt that empowering the staff and allowing them a voice was an important practice in successful collaboration. The staff members of these leaders were given opportunities to provide and receive feedback on a regular basis. A recurring concept in this theme was the idea that successful leaders do not rely on their own ideas and agendas to reach their success, but rather find structured methods to include their team members in that process. One respondent illustrated this by saying: *And for us and from what I have learned here and there is that trust is one of those things that is created when people are able to engage in meaningful dialogue with each other where they get a chance to think together so what we do here is engage in a ton of dialogue with each other.* The ongoing dialogue between teachers and leaders was continuously mentioned as a practice amongst the participants.

Daily, weekly, or regular meetings with staff and teams. Structured and regular time to meet as a staff was a major theme of the participants. Six out of seven respondents mentioned this practice a critical to their success. Although there were many

different methods by which to structure this, each leader that spoke to this theme had an organized method to enable teachers to collaborate in a number of ways including by departments, by themed groups, overall staff dialogue, and project evaluation among various others. In most cases these meetings revolved around the vision and mission of the school.

Diversity

Table 4 represents the major themes identified for diversity after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 4

Diversity Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Free sharing of ideas and perspectives.	5/7	Diversity of perspectives, diversity of truths, it is being okay with dissent and in fact encouraging dissent. It's about how to encourage cognitive conflict versus conflict and how do you work that cognitive conflict into the soil of your organization.
Ensuring that all voices are heard.	5/7	We do a school wide culture survey three times a school year that we get some good feedback from students.

Free sharing of ideas and perspectives. A majority of participants (5/7) in this study cited this theme as an important factor in transformational practices. One respondent stated:

How you use the experiences of those around you shows that there is not just one way to do it. There is not just one way to experience something. There is not one right answer. It is very rare in a business that there is black and white. There is a lot of grey. Using diversity was a part of using my team, using my teachers.

This theme was represented by participants mentioning how they used the different perspectives of both their staff and their students to provide direction for the school. A reoccurring concept was that diversity encourages the free flow of ideas and enables a leader to come up with the best solutions based on a wide variety of experiences rather than just the experience of the administrator.

Ensuring that all voices are heard. This theme was mostly directed at the demographic diversity of staff and students. Five out of seven respondents mentioned the importance of understanding the backgrounds of their staff and students and ensuring that their voices were heard on campus. Several leaders indicated that they use demographic data and surveys to ensure that they can accomplish the goal of giving everyone a voice. One administrator mentioned that there was traditionally a low participation rate of student leadership amongst Hispanic students, despite the Hispanic population making up a large portion of the student body. To change this trend, the leader actively identified students to step into these leadership roles and ensure that this important population was represented.

Team Building

Table 5 represents the major themes identified for Team Building after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 5

Team Building Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Providing activities to build camaraderie, rapport, and culture.	6/7	We do this intentionally in fact in every class during the first week in school, every teacher is required or strongly encouraged to do at least one team building activity and most teachers do more than that. We try to do team building with staff intentionally through our professional development activities.

Providing activities to build camaraderie, rapport, and culture. Six out of seven respondents cited this theme as part of their practice of effective team building. Several respondents mentioned that team building could lack authenticity if not approached strategically. For example, one respondent state: *I look at team development. When you reframe building to development, building sounds like silly activities that say hey now I trust you.* Rather than a disingenuous method of team building, these leaders cited more specific means by which to build the team into a cohesive and engaged group. One of the participants summed this up in this example:

One of my colleagues teaches world civilizations. He does this really good one called puzzles and he takes a 100 piece children's puzzle and he puts these constraints on these sophomores like you can't talk, you can't take each other's pieces and he puts them on the table. He runs a timer to see how fast they can put it together. They do that and enjoy doing it but the second phase is they debrief

what collaborative skills were necessary to do that and so he turns the puzzle into a metaphor for what it means to operate in an effective team.

Activities such as these that were engaging but purposeful were strong indicators of leadership throughout this theme. Leaders used these opportunities to build rapport, leadership, and cohesiveness.

Character and Integrity

Table 6 represents the major themes identified for character and integrity after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 6

Character and Integrity Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Modeling character and integrity as a leader.	5/7	For me as the leader of the school, character and integrity really meant the culture these students will never be higher than the culture of the adults. That is a huge part of integrity; of owning up to what you want. Do what you expect and don't ask anybody to do anything that you wouldn't do.
Establishing clear norms for behavior and expectations for students and staff.	5/7	You have a circle and a community in your building. What are the norms and expectations for each other? The members hold each other accountable for what they need to feel safe and be themselves and have a space where they are in control.

Modeling character and integrity as a leader. This theme was mentioned by five of the seven respondents. The participants that mentioned this consistently stated that it was important that the staff and students viewed them to be people of integrity and character. In personal interactions as well as decision making, the leaders felt that modeling was one of the most effective ways to ensure that character and integrity were present in their organization.

Establishing clear norms for behavior and expectations for staff and students. This theme was one in which many specifics about the program in which to implement character and integrity were cited. Leaders most often had a set code or list of expectations and norms for staff and students. Often this took the shape of a program based on research and literature and also was typically tied to the school vision and mission. One leader stated: *We have a school pledge that is codified that talks about what we believe makes up someone with character and integrity.* The practice of making these expectations clear and visible was a common theme and the idea that a teacher had a clear vision of what kind of students they wanted to develop was cited consistently.

Problem Solving and Decision Making

Table 7 represents the moderate themes identified for problem solving and decision making after the transcription and coding of interviews were complete. A moderate theme is constituted by four of the seven participants articulating the theme in their responses. There were no major themes categorized in this domain, as the highest rate of response for each theme was only four out of seven.

Table 7

Problem Solving and Decision Making Moderate Themes

Moderate Themes	Number of Respondents out of Total Participants	Example Quotations
Creating courses of action and aiming to accomplish goals or learning outcomes.	4/7	We try to make very intentional actions and courses of action that we want to do. I think it just helps everyone keep really focused and so the teachers know what they are aiming for and it helps them convey that to the students as well.
Using questions and inquiry in leading, teaching, and learning.	4/7	For example last year the challenge was “how might we solve a problem that our community faces?” We gave students the opportunity to define what they meant by community and that was really powerful and what we have seen is that culture of thinking through that has been powerful in changing the way students look at how they approach content area.
Including teachers in the decision making process and considering all viewpoints.	4/7	We have a dilemma consultancy protocol and what that allows is when me or one of our staff members have a dilemma, we come together as a group with agreed on norms and a way of talking about a problem and then we bring as many brains to the issue as we can.

Creating courses of action and aiming to accomplish goals or learning

outcomes. This theme was categorized as moderate because only four out seven respondents addressed it. For those that did address this theme, there was a reoccurring notion that problem solving should start with what the end goal is for the organization. One participant stated: *For myself, much of the leadership was devoted to the why of things. Going back to the why of this and the why of that. Making sure that what I was doing aligned with the staff and with the why of our vision.* Leaders who responded with this theme felt that aligning the decision making process with desired outcomes was most effective.

Using questions and inquiry in leading, teaching, and learning. As mentioned in Chapter II, part of PBL is the process of inquiry in teaching and learning. Four out of seven teachers pointed to PBL alignment as part of the process for inquiry in teaching and learning. A primary goal of these respondents was to implement structured methods for inquiry with teachers and staff in concordance with their framework for PBL.

Including teachers in the decision making process and considering all

viewpoints. Participants who cited this as a theme found ways to include teachers and students in the decision making process. There were some communities with a major theme in the domain of diversity as these leaders cited allowing multiple voices to be heard as an important practice in decision making and problem solving. One respondent stated: *I don't think that anyone would argue that top down decision making that doesn't take different viewpoints into account is an effective approach. Most people, both teachers and students, are much less likely to follow and perform at their best when they are not part of the decision making process.* Although there were similarities with

themes in other domains, there was a moderate response for this theme in the domain of problem solving and decision making.

Personal and Interpersonal Skills

Table 8 represents the moderate themes identified for problem solving and decision making after the transcription and coding of interviews were complete. A moderate theme is constituted by four of the seven participants articulating the theme in their responses. There were no major themes categorized in this domain, as the highest rate of response for each theme was only four out of seven.

Table 8

Personal and Interpersonal Skill Moderate Themes

Moderate Themes	Number of Respondents out of Total Participants	Example Quotations
Having teachers gain a deeper understanding of students through relationships and conversation.	4/7	We worked with students and staff on color surveys gold, green, orange and blue. We would take those so we could understand where people are at and how they change.
Teaching personal and interpersonal skills in the curriculum.	4/7	We do have a collaboration rubric and it actually gives descriptors for the type of skills that you would want to see someone use when they are interacting professionally with another person.

Having teachers gain a deeper understanding of students through

relationships and conversation. A focus on relationships as a means to develop personal and interpersonal skills was a moderate theme in this domain. There were two specific method mentioned in this theme. First, many leaders dedicated time at the

beginning of the year and several times throughout in which the teachers dedicated all class time to culture building and relationships rather than on content. The other method was to strategically develop mentorship by identifying students who need more guidance or building in ways to connect teachers to students.

Teaching personal and interpersonal skills in the curriculum. Four out of seven respondents cited building personal and interpersonal skills into the curriculum. This took the shape of student showcases to the public as well as structured assessment of students and their ability to communicate and work with and in front of a variety of people.

Communication

Table 9 represents the major themes identified for communication after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 9

Communication Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Being strategic, intentional, and systematic in communication.	6/7	Sometimes it just needs more clarification. The better the communication, then the more clear everyone is on what the goal is and it makes trying to achieve that goal much more straight forward.

Being strategic, intentional, and systematic in communication. Six out of seven respondents indicated that this theme was essential to their success in leadership.

Several leaders stated that the staff and student must have a clear understanding of process, procedures, and expectations, which the leader is responsible for communicating. One participant stated: *Communication is everything. How you speak, email, write letters, present to the board, to parents, to kids, informally and formally. Every time a thought is coming out of your body, that is what I pay attention to.* The consistent response was that leaders have to be direct, present, and connect each form of communication to purpose or the message will not be heard.

Political Intelligence

Table 10 represents the major themes identified for political intelligence after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 10

Political Intelligence Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Understanding the community that you serve.	6/7	It is crucial to know who your families are, what your teacher needs, what the pain points are for all of the constituents. Being in tune with that informs everything you do.

Understanding the community that you serve. Six out of seven participants cited understanding the community that you serve as an important practice. Many of these schools are charter schools in which students choose to attend. According to the respondents, this creates a necessity of being embedded into the community of the school

and creating partnerships around a shared identity of the school. Additionally, participants referred to board politics, community dynamics, and student needs as important elements to work around in leadership. One participant stated:

We are a charter school so every so often we have to go to the board, which is very political in all places. We negotiate big events like that, having families come out and describing the school and the district. It's important to have a sense of how that works. Negotiating partnerships with people in the district and outside so that the school is supported and it gets what it needs.

Many of the respondents felt that their leadership entailed protecting the identity and vision of the school from outside forces. This required understanding the stakeholders as well as potential groups that might not see eye to eye with the school. Consistently the leaders cited understanding the community was essential so that they could find out how to promote the school and engage people outside of the organization.

Creativity and Sustained Innovation

Table 11 represents the major themes identified for creativity and sustained innovation after the transcription and coding of interviews were complete. A major theme is constituted by at least five of the seven participants articulating the theme in their responses.

Table 11

Creativity and Sustained Innovation Major Themes

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Creating support structures to remain innovative without being stagnant or burning out.	5/7	Sustained Innovation is still important because it is easy to burnout. A pace that is sustainable is a really struggle. It was a lot because we were pushing so hard to be super creative and a high achieving school. It became very hard to sustain that pace for four years of more. That was a huge topic of our discussion as a staff.
Modeling creativity with students.	5/7	The students seeing you be creative, pressing metacognition with them, you model for them how to think outside the box.
Involving students in the design process of PBL.	6/7	While we may do the same project or driving question in a project, students are always seeking to answer it in a way that is a little better, a little different or a little more unique than those that came before them. It is encouraged through the instructional process and is celebrated culturally on campus.

Creating support structures to remain innovative without being stagnant or burning out. Five out of seven participants cited this theme as an important practice for creativity and sustained innovation. Several respondents mentioned that PBL schools have a high rate of leader turnover due to the amount of pressure and expectations placed on leaders of innovative schools. As an example, one participant

stated: *Sustained innovation is still important because it is easy to burnout. A pace that is sustainable is really a struggle. It was a lot because we were pushing so hard to be a super creative and high achieving school. It became very hard to sustain that pace for four years or more.* To overcome this challenge to sustainability, leaders cited developing leaders, sharing leadership, and creating curriculum and instruction models as effective practices.

Modeling creativity with students. Five out of seven respondents stated that modeling creativity was an important practice in this domain. One participant alluded to this practice by stating: *Our teachers ask for creativity from our students and I ask for creativity from our teachers and that is an embedded element of PBL.* Leaders who responded with this theme indicated that time is allotted for teachers to share ideas and projects, so that they can demonstrate creativity consistently throughout the school, raising the level of creativity amongst the staff and students. Additionally, student showcases are used as a means for students to demonstrate creativity to their peers and the community.

Involving students in the design process of PBL. A common theme in this domain is allowing students to have voice and choice in the PBL process. Leaders mentioned on numerous occasions that students give feedback to teachers in regards to what kind of projects they would like to be involved in and what skills they wish to learn. A participant summed this up by stating: *While we may do that same project or driving question in a project, students are always seeking to answer it in a way that is a little better, a little different, or a little more unique than those that came before them.* This

theme was consistently related to a process of continuous challenging of students and staff to be more creative and push the limits of projects done before.

Summary

Table 12 is a summary of the major themes in the responses of participants. For the two domains that did not have major themes, the moderate themes are identified with an asterisk.

Table 12

Summary of Themes by Domain

Domain	Major Themes
Visionary leadership	1) Shared sense of vision and mission 2) Creating a common language for teaching and learning 3) Vision is derived from a shared group of schools 4) Teachers collaborate and discuss topics related to the vision 5) Promotion of shared or distributed leadership
Collaboration	1) Empowering the staff and allowing a voice 2) Daily, weekly, or regular meetings with staff and teams
Diversity	1) Free sharing of ideas and perspectives 2) Ensuring that all voices are heard
Team building	1) Providing activities to build camaraderie, rapport, and culture
Character and integrity	1) Modeling character and integrity as a leader 2) Establishing clear norms for behavior and expectations for students and staff
Problem solving and decision making	1) *Creating courses of action and aiming to accomplish goals or learning outcomes 2) *Using questions and inquiry in leading, teaching, and learning 3) *Including teachers in the decision making process and considering all viewpoints
Personal and interpersonal skills	1) *Having teachers gain a deeper understanding of students through relationships and conversation 2) * Teaching personal and interpersonal skills in the curriculum

Note. * = Only had moderate themes.

(continued)

Table 12

Summary of Themes by Domain

Domain	Major Themes
Political intelligence	1) Understanding the community that you serve
Creativity and sustained innovation	1) Creating support structures to remain innovative without being stagnant or burning out 2) Modeling creativity with students 3) Involving students in the design process of PBL

Note. * = Only had moderate themes.

Results for Sub-RQ2

For the second method of coding, themes were identified in the overall responses of the participants. Sub-RQ2 was: *How have the transformational leadership characteristics of secondary principals at Project Based Learning schools led to high levels of student achievement?* This question was addressed by removing the 10 domains from consideration and instead focusing on how the responses addressed high rates of student achievement.

TL and Higher Student Achievement

Table 13 represents an overall summary of major themes across all domains. These themes address Sub-RQ2 and are specific to how the practices help to raise student achievement rates.

Table 13

Major Themes for TL and Higher Student Achievement

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Shared sense of mission and vision.	7/7	I feel that our staff because we are a small school, we actually work as a team and that we agree on what our mission and

(continued)

Table 13

Major Themes for TL and Higher Student Achievement

Major Themes	Number of Respondents out of Total Participants	Example Quotations
-	-	vision is.
Creating a common language for teaching and learning.	5/7	I feel like everyone one, all of the staff and faculty, they all speak the same language and they all buy into the mission and therefore they just have, the kids keep hearing the same message over and over again. And it just allows them to be better.
Building camaraderie around the school mission and vision.	6/7	Everything we do is team building and inviting one another into the work. I would say that it is crucial for us to hold on to a moment of joy in everything we do. So our staff meetings are infused with fun games and ice breakers and things of that nature where we are allowed to laugh together and play together and remind ourselves of the joy that we want to infuse our students with as well.
Empowering the staff and allowing a voice.	7/7	It's partnering the visionary leadership part with having a team of teacher leaders who are closest to the work and then being open to ways of achieving a vision that I might not be able to come up with on my own.

(continued)

Table 13

Major Themes for TL and Higher Student Achievement

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Building relationships of trust with staff and students.	6/7	And we have to trust one another. We've had conversations about identity, race, class and all of that is in service to our ability to recognize how we relate to our students. There are a lot of community building in the process of using restorative processes like circles in order to model what we do with our kids.
Reflection using discussion on curriculum and instruction.	7/7	Between teachers we have exhibitions for each of the grade levels at different times of the year where what is exhibited is a project that is engaged across different disciplines and that comes from teachers figuring out what they work tougher on.
Actively seeking feedback and input from stakeholders.	6/7	The thing that is coming to my mind is that our school is extremely responsive to stakeholders and to all stakeholders. I think that teachers listen when parents communicate to them. I listen when parents communicate.
Ongoing, structured professional development in-house or by outside entities.	5/7	We recently had an opportunity to learn with an organization called "Jet City Improve" and they came to teach us how to use improve as a form of not just collaboration but also co creation.

(continued)

Table 13

Major Themes for TL and Higher Student Achievement.

Major Themes	Number of Respondents out of Total Participants	Example Quotations
Focus on projects to drive student achievement rather than traditional tests.	5/7	I would say as far as student achievement by focusing on what we define as high quality PBL we are seeing a direct result in the types of projects we are creating. Student are much more engaged in therefore the outcomes are improving because of that.
Using learning showcases for students to display and demonstrate projects.	5/7	We engaged the community a lot through learning showcases and bring them into the classrooms. To have integrity and character and have positive interactions with community members was really beneficial. They came and saw their learning demonstration nights and presentations.
Using design thinking/theory.	5/7	The idea that we try to adopt around design thinking or improvement science. We use some design thinking approaches when we are looking at who are the students we are serving well and thinking of end users.

Shared sense of mission and vision. All participants indicated that a shared sense of mission and vision lead to higher rates of student achievement. According to the responses, students were better able to reach their goals and learning outcomes when they knew what the vision of the school was. A sense of pride in the school and the mission that the school promoted led to students being more invested in success.

Creating a common language for teaching and learning. Five out of seven participants indicated that creating a common language for teaching and learning lead to higher rates of student achievement. A common notion for this theme was that students understood expectations more clearly when a common language that was clear and present was used on a regular basis in the school culture.

Building camaraderie around the school mission and vision. Six out of seven participants indicated that building camaraderie around the school mission and vision lead to higher rates of student achievement. One respondent stated: *Visionary or aspirational leadership has to be met with how does that get held by the collective whole? Because the teams are much more important than any one individuals contribution in a social entity like a school.* This camaraderie, according to participants led to students being bought into the program and motivated for individual and collective success.

Empowering the staff and allowing a voice. All participants indicated that empowering the staff and allowing a voice lead to higher rates of student achievement. A common ideas amongst participants was that allowing teachers to use their expertise and creativity freely, allowed for students to be engaged at a higher level.

Empowering students and allowing a voice. All participants indicated that empowering students and allowing a voice lead to higher rates of student achievement. Participants described the learning process as one in which the students should be engaged and invested in the curriculum and instruction. In doing so, students are active participants in their education.

Building relationships of trust with staff and students. Six out of seven participants indicated that building relationships of trust with staff and students lead to higher rates of student achievement. Respondents alluded to that fact that relationships helped teachers to reach higher levels of engagement and accountability with students, thus leading to a mutual relationship of progress and success. One participant stated: *As long as my staff and faculty feel valued then they tend to give more, which the students are going to see because teachers are so involved in everything they do in their life.* These relationships, according to respondents, maximized effectiveness with staff and students.

Reflection using discussion on curriculum and instruction. All participants indicated that reflection using discussion on curriculum and instruction lead to higher rates of student achievement. All participants felt that teachers collaborating and reflecting on projects helped them to refine their practice in order to present students with lessons that were thoroughly planned and assessed.

Actively seeking feedback and input from stakeholders. Participants indicated that actively seeking feedback and input from stakeholders lead to higher rates of student achievement. Six out of seven respondents felt that continued feedback from stakeholders lead to a more diverse and well planned program for students, thus resulting in higher student achievement. In some cases, this involved the leader receiving negative feedback and filtering it to protect the staff and students. For example, one respondent stated: *Thinking from a student achievement side, not getting distracted by things that don't matter and keeping the focus on those outcomes has been really valuable.* Whether

the feedback was positive or negative, leaders cited the importance of acting as a filter for input so that it does not become a distraction, but rather a process of improvement.

Ongoing, structured professional development in-house or by outside entities.

Participants indicated that ongoing, structured professional development lead to higher rates of student achievement. Five out of seven respondents cited that they plan professional development each year in a structured way to allow for growth in a sustainable and steady format. Respondents felt that it was important to strategically use professional development, focusing on one task at a time to promote growth. This has allowed the students to progress gradually rather than experience high rates of change in curriculum and instruction practices.

Daily or weekly meetings with staff. Five out of seven participants indicated that daily or weekly meetings with staff lead to higher rates of student achievement. There were several variations of how this was structured but leaders indicated that this time was important to refine and reflect on practices so that student learning could be maximized.

Focus on projects to drive student achievement rather than traditional tests.

Five out of seven participants indicated that a focus on projects to drive student achievement lead to higher rates of student achievement. As part of the PBL focus, leaders consistently stated that the focus was on skill building rather than breadth of content. The theme demonstrated one of the core elements of the PBL framework in that the emphasis was on student work and improvement through projects rather than standardized tests. Participants felt that this lead to higher students achievement because more skills were developed that were transferable to various forms of assessment.

Using learning showcases for students to display and demonstrate projects.

Five out of seven participants indicated that using learning showcases for students to demonstrate projects lead to higher rates of student achievement. This came up consistently in the communication and creativity domains as leaders felt that student's ability to demonstrate their learning through presentation lead to higher rates of achievement.

Using design thinking/theory. Five out of seven participants indicated that using design thinking lead to higher rates of student achievement. Design thinking is focused on inquiry through driving questions and critical thinking. Leaders felt that this focus equipped students with skills that maximized their learning potential.

Summary

The purpose of this phenomenological study was to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 CASSPP test as analyzed through the lens of the 10 domains of the TLSi. This chapter was a presentation of the data collected in the study. The study consisted of interviews with seven principals of high performing PBL schools in CA. The interviews were transcribed, coded, and synthesized before being organized into major themes. The themes were organized in relation to the RQ with one set of codes related to the 10 domains of TL and the other set of codes by overall summary of the interviews in relation to student achievement. The analysis of the data identified transformational leadership practices through the lived experience of the principals that participated in the study.

Chapter V presents a final summary of the study, including the major findings, conclusions, areas for further research and implications. The chapter will conclude with a reflection by the researcher as well as an overall conclusion of findings.

CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This study examined the lived experience of principals of high performing PBL schools and analyzed the leadership practices of each principal using the 10 domains of transformational leadership. The 10 domains used were visionary leadership, collaboration, diversity, team building, character and integrity, problem solving and decision making, personal and interpersonal skills, communication, political intelligence, and creativity and sustained innovation. The RQs asked in this study included the central RQ and two Sub-RQs. The central RQ was, *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?* The Sub-RQs were:

- 1) How do secondary principals at high performing project based learning schools use the ten domains of transformational leadership to create a culture of success in their schools?
- 2) How have the transformational leadership characteristics of secondary principals at Project Based Learning schools led to high levels of student achievement?

Major Findings

The purpose of this study was to understand the lived experiences of TLs of high performing PBL schools. The method by which to understand this was a phenomenological study, using an interview instrument based on the 10 domains of TL.

A summary of the key findings found and presented in Chapter IV is presented in relation to the RQs and the two Sub-RQs.

Central Question

The central question was, *What is the experience of secondary principals who transformed their schools into high performing Project Based Learning Schools, as analyzed through the lens of the 10 domains of the Transformational Leadership Skills Inventory (TLSi)?* This question was addressed by asking the participants how they used each domain with staff and students in their schools to create a culture of success. They responded by providing examples of practices they have implemented in relation to the 10 domains. The central question produced 17 overarching practices across the 10 domains of TL of high performing PBL schools. The following characteristics were identified:

- Visionary Leadership
 - 1) Shared sense of vision and mission.
 - 2) Creating a common language for teaching and learning.
 - 3) Vision is derived from a shared group of schools.
 - 4) Teachers collaborate and discuss topics related to the vision.
 - 5) Promotion of shared or distributed leadership.
- Collaboration
 - 1) Empowering the staff and allowing a voice.
 - 2) Daily, weekly, or regular meetings with staff and teams.
- Diversity
 - 1) Free sharing of ideas and perspectives.

- 2) Ensuring that all voices are heard.
- Team Building
 - 1) Providing activities to build camaraderie, rapport, and culture.
- Character and integrity
 - 1) Modeling character and integrity as a leader.
 - 2) Establishing clear norms for behavior and expectations for students and staff.
- Problem solving and decision making
 - *There were no major common themes identified.
- Personal and interpersonal skills
 - *There were no major common themes identified.
- Communication
 - 1) Being strategic, intentional, and systematic in communication.
- Political Intelligence
 - 1) Understanding the community in which you serve.
- Creativity and sustained innovation
 - 1) Creating support structures to remain innovative without being stagnant or burning out.
 - 2) Modeling creativity with students.
 - 3) Involving students in the design process of PBL.

Sub-RQ1

In addressing research Sub-RQ1, the researcher designed an interview based on the 10 domains of TL. Each leader expressed how they implemented practices in relation

to the 10 domains, to create a culture of success in their schools. Each domain was addressed and the participants provided examples and details to help the research gain a deeper understanding of the transformational leadership qualities.

Visionary leadership. Visionary leadership was a domain that was most commonly related to a sense of shared leadership. Most respondents described their staff as a group of people that were involved in carrying out the mission and vision of the school in a way that provided for constant assessment and analysis. This also most often entailed a program in which students and staff had a common language developed with the vision at its core.

Many of the participants were part of a community of schools such as the High Tech High Network or the New Tech High Network. In these schools, a common vision and language was shared across all schools in the network. However, with that framework, each individual leader along with his or her team, created a customized vision for their specific school as well.

Collaboration. The two strongest themes in this domain were empowering the staff to have a voice and conducting weekly or daily staff meetings. Empowering the staff with a voice was a strong theme across many domains but in this domain some of the examples included giving staff and student surveys, establishing a leadership team and conducting focus groups. No matter what the method was, the theme was that at each school, the “top down” leadership mentality was not enforced, rather the idea of distributed leadership was most common.

Although most schools have some form of staff meetings, the common theme with the schools of these TLs was that the staff had regularly scheduled time to

collaborate with their colleagues and administration. Rather than simply just conducting whole staff meetings regularly, these schools found time to do PLCs, department meetings, project based instruction meetings, and restorative practice meetings among others. These leaders were creative in allowing their staff members to have quality time to collaborate.

Diversity. In analyzing the data for diversity, the two strongest themes for practices was to create an environment where ideas were shared freely and ensuring that all voices are heard. Although these two themes sound similar there was a distinction. First, the free sharing of ideas was most often related to projects. Teachers and students had the opportunity to work collaboratively in the design of projects, giving feedback and promoting student choice. One of the ways this was accomplished was through student surveys.

Ensuring all voices are heard was most often related to ethnic diversity. Many respondents spent time with staff planning ways to ensure that student leadership was reflective of the demographics of the schools. Also, in most schools, many content and instructional planning opportunities were developed to educate students on their history of promote a social consciousness.

Team building. The data presented one strong theme for team building. The strongest theme from the participants was providing activities to build camaraderie, rapport and culture. This was applicable to both students and teachers. One example that came up several times was using instructional days to conduct engaging activities and culture based instruction for students. This provided opportunities for teachers and students to engage in topics that were unrelated to content specific curriculum but rather

focused on the culture of the school. The staff members of the leaders also participated in activities to promote team such as improve, school-wide scavenger hunts, and staff retreats.

Character and integrity. In analyzing the data for character and integrity there were two themes identified. First, the participants felt that the practice of modeling character and integrity to staff members and students was key to their success. The leaders commonly felt that the staff and students had to have trust in leadership and that the school reflected the trustworthiness of the leader. Character and integrity helped these leaders to connect with team members because of trust and established relationships.

Establishing clear norms and expectations was another strong theme in the responses. The respondents felt that teachers and students need to have a clear understanding of what kind of student the school leaders want to develop behaviorally, academically, and socially.

Problem solving and decision-making. There were no major themes identified in this domain.

Personal and interpersonal communication. There were no major themes identified in this domain.

Communication. In analyzing the data for this domain, being strategic, intentional, and systematic in communication was a strong theme. The participants felt that the staff and students functioned at a high level when the goals, processes, and procedures were clearly communicated. Many of the respondents felt that email was not

always the best option and that leaders should implement a variety of communication methods by which to establish effective communication with staff members.

Political intelligence. In analyzing the data for political intelligence, one major theme was identified. Understanding the community that you serve was identified as a major theme for a variety of reasons. Many of the schools are charter schools and must implement a program of community participation in order for them to maintain a healthy level of enrollment and funding. The leaders most commonly pointed out that it was their job to understand the community for both positive and negative reasons. In some cases the leaders felt it necessary to protect staff and students from negative outside factors in the community.

Creativity and sustained innovation. There were three major themes identified as effective practices in this domain. First, creating a program in which staff members can avoid burnout or becoming stagnant was a challenge but a necessity. Many leaders indicated that a PBL school can have high rates of attrition in leadership and teachers because the demands for creativity are so high. The participants found ways to create structures and shared leadership to address this challenge.

The other two themes were modeling creativity and involving students in the design process. The participants felt that students had to have voice and choice in the process of project design because it lead to higher rates of engagement. Many also felt that the teachers must model that they are creative and interested in utilizing a variety of skills. The leaders felt this inspired students to use their own creativity in a productive way.

Sub-RQ2

For each question related to the 10 domains of TL, participants were asked how the domain was used to lead to higher rates of student achievement. There were 13 major themes identified for Sub-RQ2:

- Shared sense of mission and vision.
- Creating a common language for teaching and learning.
- Building camaraderie around the school mission and vision.
- Empowering the staff and allowing a voice.
- Empowering the students and allowing a voice.
- Building relationships of trust with staff and students.
- Reflection using discussion on curriculum and instruction.
- Actively seeking feedback and input from stakeholders.
- Ongoing, structured professional development in-house or by outside entities.
- Daily or weekly meetings with staff.
- Focus on projects to drive student achievement rather than traditional tests.
- Using learning showcases for students to display and demonstrate projects.
- Using design thinking/theory.

The themes identified in Sub-RQ2 had some commonalities with the central question and Sub-RQ1. However, in looking at the results through the lens of student achievement, specifically, some of the themes were unique to this sub question. The themes specific to this question included: building camaraderie around the mission and vision of the school, empowering the students and allowing a voice, building relationships of trust, reflection using discussion on curriculum and instruction, focus on

projects rather than traditional tests, using learning showcases for students to demonstrate learning, and using design thinking as part of their planning and curriculum. The participants felt that these characteristics were specifically related to higher rates of student achievement whether directly or indirectly.

Unexpected Findings

There were a few unexpected findings in this study. First, there was an unexpected enthusiasm on behalf of the participants. This was such a specific study that put these leaders in a category in which they could closely identify with each other. Not only were they eager to participate, they were also eager to share and use the final results for reflection on their leadership. With the exception of one person who did not respond to repeated attempts to participate, the leaders were incredibly helpful in the process.

Another unexpected finding was the fact that there were no major themes reported in the domains of problem solving and decision making and interpersonal skills. There were moderate themes found in these domains, but the lack of a major theme was surprising. This indicated a wide variety of responses that could not be categorized into one major theme. The expectation in decision making was that there would be common practices, protocol, and frameworks for making decisions and both implementing and teaching problem solving. Likewise, the personal and interpersonal domain lacked common overarching themes due mostly to the fact that participants responded to this question with narratives that were very specific to their individual personalities.

The last unexpected finding was open dialogue and honesty with which the leaders approached the study with. Often, leaders are protective of specifics of their program and approach, but these leaders freely shared personal experiences and reflection

to make the study more transparent than expected. Despite the fact that the participants answered the interviews in isolation, there was a sense of a desired collaboration with fellow leaders of high performing PBL high schools in CA.

Conclusions

There were several conclusions drawn from the research findings of this study in regards to what the experience of secondary principals who transformed their schools into high performing PBL schools, as analyzed through the lens of the 10 domains of the TLSi. Across the state of CA, the lived experiences of 7 TL of high performing PBL schools in CA were examined. These leaders implemented practices related to the 10 domains to reach high levels of success with both staff and students. Their leadership was the focus of the study and enabled the researcher to draw several strong conclusions.

Conclusion 1

The first conclusion drawn from the research findings was: In order to accomplish the vision and mission of the school, leaders relied upon the experience, feedback, and leadership of their staff for success.

TL of high performing PBL schools depended on distributed or shared leadership to accomplish the mission and vision of the school. Every respondent alluded to the necessity of leaders to receive feedback and input from their team members. In some cases this took the shape of leadership teams or advisory boards, while in other cases this involved consistently opportunities for the whole staff to participate in leadership roles. Participants in the study felt that TL involved a process of continuous reflection with the staff and making decisions based on their team's input.

The study indicated that both shared leadership and collaboration were essential characteristics to the success of TL. The following points summarize the findings related to shared leadership and collaboration:

- Team members were asked formally and informally on a regular basis to provide feedback and insight into the process of the staff in accomplishing the mission and vision of the school.
- Leaders identified strengths and experiences amongst their staff members in the planning, decision making, and collaborative process.
- Leaders created a culture where ideas were shared freely and creative processes were encouraged.
- The leaders and staff members were committed to the mission and vision of PBL and were given opportunities to share success and failures in the process of refining their practice.
- Leaders envisioned their role as a supporter and facilitator of the teachers with a focus on teaching and learning, rather than as managers.

Conclusion 2

The second conclusion drawn from the research findings was: Leaders of high performing PBL schools established structured time for collaboration and planning amongst teachers and administrators to reflect and provide feedback on student project design.

The majority of participants in the study described the structure in which they provided time for planning and collaboration with their staff. In some cases this was daily and in other cases this was weekly. However, the common theme was that the

leaders clearly identified the purpose and meaning of the professional development time they planned and teachers had a clear understanding of expectations. Time for planning and collaboration ensured that teachers and administrators were on the same page in curriculum and instruction to provide opportunities for growth and consistency of the program.

Providing regular time for teachers to meet to discuss instruction and planning was critical in the success of the leaders. The following points summarize the findings in relation to structured opportunities for staff meetings and collaboration:

- Leaders built professional development and collaboration time into the weekly or daily schedule.
- Each time the teachers met, whether it was in professional learning communities, departments, themed groups, or as a whole staff, the leaders gave clear guidelines of what was to be accomplished in each session.
- Teachers were giving opportunities to share their project design and student work to encourage feedback and consistency of expectations in their program.
- A culture of collaboration was established by identifying consistent themes for collaboration and professional development.
- Teachers were able to identify specific students in need and have conversations revolving around intervention strategies for improvement with each student.

Conclusion 3

The third conclusion drawn from the research findings was: A common language was developed for teachers and students, often including school wide activities or projects to reinforce the mission and vision.

Leaders in this study consistently emphasize how important common language was in the implementation of PBL School wide. Most leaders identified specific school wide projects that were used to establish expectations and norms related to projects with students. In some cases this involved grade level project benchmarks in which students had to demonstrate mastery of skills. In other cases this involved days dedicated to re-norming students of school expectations for culture, learning, and behavior.

Creating a common language was identified in this study as a key element to achieving the school mission and vision. In more than one domain, leaders indicated that a significant amount of time was dedicated to teachers and students in solidifying school expectations through a common language. The following points summarize the findings in relation to common language:

- Leaders established school wide activities and projects to establish a consistent language of assessment, behavior expectations, teaching expectations, and learning expectations.
- Leaders developed a culture in which a common language was used to reinforce the mission and vision of the school.
- School wide projects, benchmarks, and expectations were given names that were recognizable and were well known to students and staff.
- Many of the respondents built a common language based on a framework

developed by a network of schools such as the New Tech High Network or High Tech High Network.

Conclusion 4

The fourth conclusion drawn from the research findings was: Leaders ensured that students were empowered with voice and choice in their projects to encourage engagement and high levels of learning.

Leaders in the study emphasized the role of the student as an active participant in the culture of the school as an important element to the school's success. In more than one domain, participants alluded to students having a voice and choice in projects and school culture. The following points summarize the findings in this conclusion:

- Students provided feedback to teachers on the design of projects and lessons so both the teachers and students could improve.
- Students were given choices on a regular basis in regards to the content that they researched.
- The focus of learning was on skill development rather than content, providing students and teachers flexibility in the content learned.
- Students were consistently involved in surveys, focus groups, and collaboration with staff to ensure that the school was meeting the needs of the students.

Conclusion 5

The fifth conclusion drawn from the research findings was: Leaders established a strong culture of learning at their schools by understanding the communities that they

served, establishing clear expectations and goals, and implementing culture based activities to reinforce the mission and vision of the school.

A major theme across all domains and questions was a deep understanding of the community that the school and leaders served. In most cases, the schools were charter schools in which students chose to attend. Because of the high demands for enrollment and the need to attract students as well as meet the needs of the traditionally community, leaders had to be in tune with the stakeholders in the area. The following points summarize the findings for this conclusion:

- Leaders had to develop relationships with school boards, parents, and district office personnel to communicate the accomplishments and the vision of the school.
- Students were asked to present at learning showcases and produce projects that were highly public to demonstrate the learning at the school to a wide audience.
- Leaders had to be aware of the criticisms of their school and protect students and staff from negative influences, while also responding to feedback.
- Leaders of these high performing schools created advisory teams to provide feedback and to gain a deeper understanding of the needs of the community.

Conclusion 6

The sixth conclusion drawn from the research findings was: Leaders established a consistent process of improvement through effective communication with staff, seeking feedback from stakeholders, utilizing surveys, and structuring time with staff for assessment of progress.

One of the common themes of the personality of the participants in this study was their constant drive to improve. They did not speak as though they had all the answers, but most of them made it clear that they would seek every person that they could to find the right answers. Failures and mistakes were expected, but the leaders found ways to ensure that they would learn from mistakes as leaders by implementing a program in which collaboration, feedback, and ongoing strategic change were always occurring.

The following points summarize this conclusion:

- Leaders understood that they had to be strategic in their process for improvement so that they did not become stagnant as a staff. Although the schools were performing at a high level, the leaders were not satisfied with status quo.
- The leaders in this study asked tough questions of themselves and the staff in a way that promoted honesty for the sake of improvement.
- The vision and mission of the school were used as a metric for the staff to evaluate their progress.
- Surveys were used with students and staff to monitor progress in all areas including culture, safety, instruction, project design, and student engagement.

Implications for Action

The researcher found that TLs of high performing PBL high schools were driven to improve as individuals as well as with their teams. They were committed to the mission and vision of the school and utilized the experiences and talents of staff and students to accomplish the mission. There were implications for action identified in this study by examining the findings of the research. The implications for action are

suggestions by the researcher that will help aspiring TLs and those implementing programs of PBL in their process of reaching their goals as leaders. The examples, themes, and findings of the researcher have provided clear methods for leaders to draw from.

Implication for Action 1

A leader of a PBL high school has to establish a clear mission and vision and build the program around that mission and vision. The universal common theme amongst all of the leaders was that they knew who they were as a school and everything they did as a staff and student body revolved around that identity. All of the participants had a tie to the framework of PBL but some of them were more specifically tied to design thinking. Whatever their mission and vision stated, was a living and breathing statement by which they implemented all professional development, collaboration, assessment, and project design.

It is essential to give your school a clear identity and they establish everything else from that core. One way of accomplishing this is planning based off of what kind of student you want to produce. By asking this question, you can designed school wide benchmark projects, rubrics, and activities that are engaging and relevant to students. As a staff you must meet regularly to assess whether they were reaching their goal of developing their ideal student.

Each leader worked in a PBL setting. However, the leaders didn't prescribe to a pre-set formula for how PBL was done. Instead, they took the ideals and framework of PBL and adapted it to the needs of students in their community and their vision as a school. Whether the school is focused mostly on college preparation or if it with a more

career based approach, leaders have to implement PBL in a way that fit the vision of their school and community, and most importantly their students.

Implication for Action 2

A PBL leader has to implement a method by which to share leadership and provide opportunities for the staff to be part of the planning process. Every respondent emphasized the importance of distributed leadership. There were several different ways in which this was accomplished:

- You can establish formal leadership teams that consist of teachers or a combination of teachers, parents, and students.
- In addition to a leadership team, you may have regular feedback sessions with the whole staff as long as the questions are direct and the method by which you collect the feedback is effective.
- A leader has to be intentional in establishing a way to capitalize on the experience and talents of their team members. This can be accomplished by identifying talents through observation and spending face to face time with teachers to develop deeper relationships.

Implication for Action 3

In a PBL program, there has to be planned and structured collaborative time to evaluate the effectiveness of projects as a staff. In a PBL setting, it is important to create a system that allows for a variety of approaches to collaboration. A suggested format for a school with one weekly allotted time for collaboration would be:

- Week one is a staff meeting in which school wide updates, reflections, data, school culture based planning, and upcoming events are discussed.

- Week 2 is an opportunity for a department themed PLC or group to reflect on project design, project assessment, and discussion of classroom practices. This would be an opportunity for colleagues to share student work and provide feedback for improvement. This is also a time in which departments can reflect on and edit common rubrics for student assessment.
- Week 3 would be a themed PLC or group to address topics revolving around their theme. A suggested breakdown of groups is school culture, assessment and project design, instruction and classroom practices, and school leadership.
- Week 4 would be an additional whole staff meeting that would revolve around one or two specific yearlong focuses would be addressed. This usually would revolve around a program that is being implemented, a practice that is being implemented, a school focus goal or a theme related to ongoing professional development from an outside organization.

Another method by which to do this would be a bi-weekly system where once a week the whole staff meets and the other day in the week would be dedicated to the aforementioned small focus groups.

Implication for Action 4

A TL in a PBL environment must have a strategic plan for establishing and maintaining a positive student culture. PBL is dependent on an instructional design that is attuned to the interests, backgrounds, and needs of students. Effective PBL leaders create a culture that is student centered by develop a plan to engage students on a deeper level. This is done in a variety of ways including:

- Creating system wide guidelines for projects that encourage students to learn

through inquiry and active research to solve problems.

- Designing school wide project benchmarks that allow students to reflect, share their opinions, and allow for students to learn from mistakes.
- Emphasizing building relationships between teachers and students, teachers and administration, administration and students, and students and community leaders.
- Creating an environment where every individual is valued through public recognition, consistent surveys, opportunities for collaboration, and restorative practices for behavior.
- Promoting a sense of professionalism through clear expectations for staff and students.

TLs have a strong presence on campus and are in tune with the culture of staff and students. The leaders of high performing schools are visible to students and staff and model the type of behavior that is expected of each and every individual. The common theme amongst all high performing PBL high schools is that the culture is strong and easily recognizable to anyone who sets foot on campus.

Implication for Action 5

Students must exercise voice and choice in the classroom and school wide to promote individual growth and foster intrinsically motivated students. The students of high performing PBL schools play an active role in the success of the school. Students are a part of the PBL design because teachers implement practices that invite student feedback through surveys, interviews, and classroom discussion. Project menus that enable students to choose from a variety of platforms and subjects help to provide a sense of buy in from the students.

Student leadership in high performing PBL schools is distributed well across the student body. Student contests, student managed projects for school improvement and student lead activities build a culture of shared leadership that includes students as young professionals.

Recommendations for Further Research

Based on the study and findings, it is recommended that further research be conducted in the development of transformational leadership in PBL high schools by:

1. Including a study of principals of high performing PBL schools nationwide.
2. Conducting a study which focuses directly on the problem solving and decision making processes as well as personal and interpersonal skills practices of transformational leaders of high performing PBL schools. There was not a sufficient amount of consistency in these domains to draw strong conclusions for this study. However, there were a wide variety of useful examples shared for these domains. A study focusing specifically on these areas would reveal more strategically advantageous practices for aspiring transformational leaders to implement.
3. A comparative study on the TL skills of leaders in high performing PBL schools versus leaders of more traditional high performing programs based on the ten domains of TL. It would be useful to draw comparisons and look for commonalities to establish effective practices for all aspiring leaders regardless of the instructional model of the school.
4. Conduct a study which focused on the same criteria but for K-12 based programs.

5. A study focusing on the leaders of charter versus non-charter PBL schools.
6. A study to develop the rationale for PBL schools.
7. A study to identify the amount of formal versus informal communication that occurs in PBL schools.

Concluding Remarks and Reflections

This study has been an incredibly beneficial and inspiring process for me as a leader. As a principal of a PBL high school, I have been reinvigorated by the shared experiences of these TLs. Leading a PBL program that is true to the PBL instructional framework but determined to reach high levels of student achievement is a challenging task. There are pressures to remain true to the tenants of the creative design process of PBL but there are also pressures to continuously improve student achievement on state assessments and college and career readiness. This experience has given me tools and examples to implement in order to reach our goals and to carry out the vision my school.

I was a bit surprised to hear of the commonalities I share with many of the leaders of this study. Participants consistently pointed to the challenges of maintaining an innovative and creative culture in a high stakes testing environment. However, the encouraging theme was that these leaders did not claim to have all the answers to these challenges. Instead, their message was one of collaboration and ongoing improvement for themselves, the staff, and the students. All of the participants were interested in reviewing the results of the study so they could examine the successes of others. In fact, many were interested in creating a more ongoing relationship of PBL leaders across the state to continue to further the success of their schools and all schools implementing a PBL program. This was also reflected in their commitment to use their staff in shared

leadership roles. Part of TL is identifying the strength of your team and these leaders consistently alluded to their reliance on the distributed talents and experiences of their staff.

I thoroughly enjoyed the conversations revolving around student relationship and student work. The student is central to the success of a PBL school. The leaders I spoke with talked at length about students showcasing their work, taking on leadership roles on campus, and driving the culture of the school. This type of culture, in my opinion, is essential in developing 21st century learners. Students that attend the schools of these leaders are bought into the program and they feel that they are integral to the success of the school. That is the way that all schools should be.

Another aspect to the interviews that I benefited greatly from was the emphasis on the creative process. There was no acceptance of the status quo. In the whole state of CA, only eight individuals qualified for the criteria of high performing PBL schools. However, the leaders were not satisfied with where they were as a school. Instead, they spoke of how they continued to collaborate with their teachers and students to push the limits of creativity. The focus was not on the content, but on the skills they were developing. This mentality provided the opportunity for teachers to use their creativity in project design to bring the very best out of their students.

I have become a different leader through this experience. From the research to the study, I have discovered a whole new set of tools and ideas that will have an impact on my staff and students. The focus on TL enabled me to dig deeper into the practices of effective leaders. Most importantly, through this study I have gained the experience of listening to the lived experience of these TLs so that I can become a better leader myself.

This study will help others to take on the challenges that PBL presents with a set of tools and practices to take their schools to a higher level.

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APPENDIX A

Synthesis Matrix

Sources Variables	International Status and Competition	Technological Impact on the world.	Globalization and the US Economy	21 st Century Skills	Background for the standards- NCLB	Common Core Standards Initiative	Common Core Focus and Expectations	Smarter Balanced testing and the	History of PBL	PBL Focus and Expectations	PBL and Technology	Transformational Leadership	The demands of the principal	Principals as transformational leaders	Methodology
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findings. University of Minnesota and University of Toronto.																	
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McTighe, J. & Wiggins, G. (2013). Essential questions: Opening doors to student understanding. Alexandria, VA: ASCD.							✓										
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Silver, H. F., Dewing, R. T., Perini, M. J., & Jacobs, H. H. (2012). <i>The core six: Essential strategies for achieving excellence with the common core</i> . Alexandria, VA: ASCD.																
Shelton, E. J. (2012). Transformational leadership: Trust, motivation, and engagement. Bloomington, IN: Trafford Publishing.												✓				
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Smarter Balanced Assessment Consortium (2016). What is Smarter Balanced. Retrieved on July 3rd, 2016 from http://www.smarterbalanced.org/about/								✓								
Spring, J (2012). American Education (15th ed.). New York, NY: McGraw-Hill.				✓												
Stern, R. H. (2016). Not just common sense: Principled sense making and implementation of the common core at two middle schools (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Global (Order No. 10102269).								✓								
Stevenson, J. (1922). The Project Method of Teaching. New York: Maximillian Co.									✓							
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APPENDIX B

Letter of Invitation

August 19, 2016

Dear Prospective Study Participant:

You are invited to participate in a research study involving principals of high performing project based learning schools in California. The main investigator of this study is Daniel Ching, Doctoral Candidate in Brandman University's Doctor of Education in Organizational Leadership program. You were chosen to participate in this study because you are a principal of a project based learning school that had students achieving higher than 65% at standard or exceeding standard in math or English on the 2015 California Assessment of Student Progress and Performance. There are eight principals in the state of California that fit the criteria. Participation should require about an hour of your time and is entirely voluntary. You may withdraw from the study at any time without consequences.

PURPOSE: The purpose of this phenomenological study is to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 California Assessment of Student and Performance and Progress (CASSPP) test as analyzed through the lens of the 10 domains of the TLSi

PROCEDURES: If you decide to participate in the study, you will be invited to participate in an interview that will be based on the transformational leadership skills inventory. The interview will consist of ten questions. You will be asked how you use transformational leadership to implement project based learning schoolwide in a way that leads to high levels of student achievement.

RISKS, INCONVENIENCES, AND DISCOMFORTS: There are no known major risks to your participation in this research study. It is not necessary to meet in person for this interview but if it is preferable, arrangements can be made.

POTENTIAL BENEFITS: There are no major benefits to you for participation, but this is an opportunity to share experiences and practices with other principals at project based learning schools.

ANONYMITY: Records of information that you provide for the research study and any personal information you provide will not be linked in any way.

You are encouraged to ask any questions, at any time, that will help you understand how this study will be performed and/or how it will affect you. You may contact the principal investigator, Daniel Ching through email at dching@mail.brandman.edu. If you have any further questions or concerns about this study or your rights as a study participant, you may write or call the Office of the Executive Vice Chancellor of Academic Affairs, Brandman University, and 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

Very Respectfully,

A handwritten signature in blue ink, appearing to read 'D. Ching', is positioned above the printed name.

Daniel Ching
Principal Investigator

APPENDIX C

Informed Consent Form

RESEARCH STUDY TITLE: A Qualitative Study Exploring the Influence of Intrinsic and Extrinsic Motivation on the Transition of Low-Income Students to Higher Education

BRANDMAN UNIVERSITY
16355 LAGUNA CANYON ROAD
IRVINE, CA 92618

RESPONSIBLE INVESTIGATOR: Daniel Ching, Doctoral Candidate

TITLE OF CONSENT FORM: Research Participant's Informed Consent Form

PURPOSE OF THE STUDY: The purpose of this phenomenological study is to explore the lived experience of secondary principals who have transformed their schools into fully implemented PBL schools that were ranked among the highest performing on the 2015 California Assessment of Student and Performance and Progress (CASSPP) test as analyzed through the lens of the 10 domains of the TLSi.

In participating in this research study, you agree to will be invited to participate in an interview that will be based on the transformational leadership skills inventory. The interview will consist of ten questions. You will be asked how you use transformational leadership to implement project based learning schoolwide in a way that leads to high levels of student achievement. This will require you to give specifics on practices and procedures at your school.

I understand that:

- a) There are no known major risks or discomforts associated with this research. I will have to interview with the principal investigator over the phone or in person despite the fact that we have never met.
- b) There are no major benefits to you for participation, but a potential may be that you will have an opportunity to share your experiences to other principals that are seeking to successfully implement project based learning at their schools.
- c) Money will not be provided for my time and involvement

- d) Any questions I have concerning my participation in this study will be answered by Daniel Ching, Brandman University Doctoral Candidate. I understand that Mr. Ching may be contacted by phone at (559) 760-5042 or email at dching@mail.brandman.edu
- e) I understand that I may refuse to participate or withdraw from this study at any time without any negative consequences. Also, the investigator may stop the study at any time.
- f) I understand that the study will be audio-recorded, and the recordings will not be used beyond the scope of this project.
- g) I understand that the audio recordings will be used to transcribe the interviews. Once the interviews are transcribed, the audio and the interview transcripts will be kept for a minimum of five years by the investigator in a secure location.
- h) I also understand that no information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed and my consent re-obtained. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call of the Office of the Executive Vice Chancellor of Academic Affairs, Brandman University, and 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641. I acknowledge that I have received a copy of this form and the Research Participant's Bill of Rights.

I have read the above and understand it and hereby voluntarily consent to the procedures(s) set forth.

Signature of Participant or Responsible Party

Date

Signature of Witness (if appropriate)

Date

Signature of Principal Investigator
Brandman University IRB May 2014

Date

APPENDIX D

Interview Questions

The following questions are based off of the TLSI (Larick & White, 2010) survey. Each question represents one of the 10 domains of transformational leadership. Please answer the questions as thoroughly and succinctly as possible.

All data collected via this interview will remain confidential and in the sole, secured possession of the researcher.

- 1) How have you used **Visionary Leadership** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 2) How have you used **Collaboration** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 3) How have you used **Diversity** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 4) How have you used **Team Building** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 5) How have you used **Character and Integrity** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 6) How have you used **Problem Solving and Decision Making** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 7) How have you used **Personal and Interpersonal Skills** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?
- 8) How have you used **Communication** to create a culture of success?
 - a. How has this characteristic led to higher student achievement?

- 9) How have you used **Political Intelligence** to create a culture of success?
- a. How has this characteristic led to higher student achievement?
- 10) How have you used **Creativity and Sustained Innovation** to create a culture of success?
- a. How has this characteristic led to higher student achievement?